

Technical
Report
72-9

HumRRO-TR-72-9

HumRRO

AD743853

Analyses of Selected Drug-Related Topics: Findings From Interviews at Four Armed Service Locations

Allan H. Fisher, Jr.

HUMAN RESOURCES RESEARCH ORGANIZATION
300 North Washington Street • Alexandria, Virginia 22314



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March 1972

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Allan H. Fisher, Jr.

**HumRRO Division No. 7 (Social Science)
Alexandria, Virginia**

HUMAN RESOURCES RESEARCH ORGANIZATION

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This research was sponsored by the Advanced Research Projects Agency of the Department of Defense under ARPA Order 1777 and was monitored by the U.S. Army Research Office under Contract Number DAHC-19-70-C-0012. Views and conclusions expressed herein are the primary responsibility of the author or the contractor, and should not be interpreted as representing the official opinion or policy of ARPA, DoD, or any other agency of the Government.

The Human Resources Research Organization (HumRRO) is a nonprofit corporation established in 1969 to conduct research in the field of training and education. It is a continuation of The George Washington University, Human Resources Research Office. HumRRO's general purpose is to improve human performance, particularly in organizational settings, through behavioral and social science research, development, and consultation.

**Published
March 1972
by
HUMAN RESOURCES RESEARCH ORGANIZATION
300 North Washington Street
Alexandria, Virginia 22314**

I

BIBLIOGRAPHIC DATA SHEET	1. Report No. HumRRO-TR-72-9	2.	3. Recipient's Accession No.
	4. Title and Subtitle ANALYSES OF SELECTED DRUG-RELATED TOPICS: Findings From Interviews at Four Armed Service Locations		5. Report Date Mar 72
7. Author(s) Allan H. Fisher, Jr.		6.	
9. Performing Organization Name and Address Human Resources Research Organization (HumRRO) 300 North Washington Street Alexandria, Virginia 22314		8. Performing Organization Rept. No.	
12. Sponsoring Organization Name and Address Advanced Research Projects Agency, Department of Defense Washington, D.C. 20301		10. Project/Task/Work Unit No. ARPA Order 1777	
		11. Contract/Grant No. DAHC 19-70-C-0012	
		13. Type of Report & Period Covered 2nd report in series of 2	
		14.	
15. Supplementary Notes Work Unit DELTA, DoD Nontherapeutic Drug Usage Survey and Research, HumRRO Division No. 7 (Social Science), Alexandria, Virginia. The companion report is: Preliminary Findings From the 1971 DoD Survey of Drug Use, Technical Report 72-8			
16. Abstracts This report of Phase II of a two-phase research project designed to investigate reasons for drug use summarizes interview information concerning military job performance effects of drug use, and attitudes toward and knowledge of drug treatment and rehabilitation among servicemen. Major reasons given for the initial use of marijuana in the military were curiosity and enjoyment. Differences in attitudes toward drug use and drug abuse control were found between careerist and non-careerist enlisted men. Awareness of local drug rehabilitation facilities was low, although awareness of DoD and VA programs was higher.			
17. Key Words and Document Analysis. 17a. Descriptors <ul style="list-style-type: none"> *Drug addiction *Drug research *Drug therapy *Drugs *Hallucinogenic drugs *Interviews *Military personnel *Narcotics *Performance evaluation 17b. Identifiers/Open-Ended Terms Drug education effectiveness Drug rehabilitation programs Drug use attitudes Reasons for drug use 0509 Behavioral and social sciences/Personnel selection, training, and evaluation			
17c. COSATI Field/Group 0615 Biological and medical sciences/Pharmacology		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 77
18. Availability Statement Approved for public release; distribution unlimited		20. Security Class (This Page) UNCLASSIFIED	22. Price

FOREWORD

This report describes research performed by the Human Resources Research Organization in the second phase of Project DELTA, which has as its principal objectives the determination of the incidence of drug abuse in the Armed Forces and the identification of demographic correlates of nontherapeutic drug use. In fulfillment of these objectives, HumRRO activities included both a comprehensive, worldwide, anonymous survey of drug use (Phase I) and a series of personal interviews (Phase II). This report describes the findings from the personal interview phase, which provided preliminary findings on such topics as reasons for the use of nontherapeutic drugs, attitudes among Servicemen toward drug use and reported job performance effects of drug use.

The project was conducted by HumRRO for the Advanced Research Projects Agency of the Department of Defense. The assistance and cooperation of the Services was instrumental in performance of this research. Of particular assistance were on-site military liaison officers. The overall effort was monitored by Mr. Mark M. Biegel of the Office of the Assistant Secretary of Defense for Health and Environment.

The work on Phase II was begun in February 1971 and completed in December 1971; the interviews took place in September and October. The research was conducted by HumRRO Division No. 7, Alexandria, Virginia, Dr. Arthur J. Hoehn, Director. Dr. Allan H. Fisher, Jr., was Principal Investigator on the project. HumRRO staff members serving as research assistants and field interviewers were Mr. Gary J. Hartzler and Mr. John A. Richards. Mr. Hartzler performed the computer-based data analyses. Mr. David E. Farley assisted with interviews and data coding.

The work was performed under ARPA Order 1777 and was administered by the U.S. Army Research Office through Contract Number DAHC-19-70-C-0012.

Meredith P. Crawford
President
Human Resources Research Organization

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SUMMARY AND CONCLUSIONS

PROBLEM

There is a dearth of information about the causes and effects of nontherapeutic drug use in the Armed Forces. Extensive programs of identification, education, and rehabilitation are now in various stages of implementation in the Armed Forces, but much remains to be learned about the extent of the drug abuse problem in the military services, if appropriate policies are to be formulated and actions taken to alleviate the problem of drug abuse. Research is needed to study the magnitude of the drug abuse problem and to contribute to the body of knowledge about the effects of nontherapeutic drug use in the Armed Forces.

This report describes activities performed by HumRRO in the second, parallel phase of a two-phase drug research project. Phase I of the project included a worldwide survey of the incidence of drug use among representative samples of enlisted personnel in the Army, Navy, Marine Corps, and Air Force. The survey was conducted in September 1971. Phase II of the project included personal interviews on selected, sensitive drug-related topics among 230 servicemen at four Continental United States (CONUS) locations. Phase II findings address the reasons for initial drug use, the effects of drug use, and knowledge and attitudes toward drugs and drug-related topics among servicemen.

APPROACH

The objective of Phase II was to (a) extend the level of analysis of selected topics also addressed in the Survey of Drug Use, and (b) explore additional topics of recent origin. Probing interview techniques were used to study these topics. A semistructured interview guide was used to direct the interview. Youthful interviewers performed the intensive, one-hour individual interviews.

A total of 230 personal interviews were conducted with officers and enlisted men at four CONUS locations. Interviewees represented the Army, Navy, Marine Corps, and Air Force. Each Service location was requested to provide a representative sample from component organizations. The Army provided 70 interviewees; the Marine Corps provided 61 interviewees; the Air Force provided 45 interviewees; and the Navy contributed 54 interviewees.¹

Both structured and probing questions were used to study reasons for the initial use of drugs in civilian and military environments. The effects of drug use were also studied. Descriptions of the personal subjective effects of drug use and the observed or expected effects of drug use on performance were obtained. The topic of "flashback" effects was studied, on the basis of subjective report and reported observation of the phenomenon.

Attitudes toward drugs were explored in two ways. Actual attitudes toward certain drug topics were analyzed by the pay grade category of the interviewee. Perceived (or attributed) attitudes toward drug use were elicited for selected reference groups, also delineated by pay grade category. The congruence between actual attitudes and attributed attitudes was studied for selected reference groups.

Awareness of drug rehabilitation opportunities was examined. Questions were used to determine whether men were aware of (a) the DoD exemption policy, (b) Veterans

¹ Fewer interviewees were requested from the Air Force and Navy sites because interviews were conducted at those locations during a four-day work week.

Administration drug treatment programs, and (c) local drug rehabilitation programs. For the latter, probing questions were used to ascertain whether servicemen claiming awareness of a local drug rehabilitation program could name the program or its administrator, and could specify its physical location. As a basis for comparison, information about actual local drug rehabilitation facilities was obtained at each of the interview sites.

Data were analyzed by three methods: (a) computer-based analysis of precoded data, (b) content analysis of selected items, and (c) verbatim transcriptions of significant comments in the subject's own words.

RESULTS

Other than alcohol, marijuana was the first drug which men had used¹ in both civilian and military environments. The major reasons given for the initial use of marijuana as a civilian were curiosity and the use of the drug by friends, and major reasons given for initial use after entering the Service were curiosity and personal enjoyment. In this sample, there was limited evidence of the military environment contributing to drug use because of boredom or combat pressure.

Typical in-Service current drug use consisted principally of alcoholic beverages and, to a lesser extent, marijuana. Users of alcoholic beverages rarely admitted to the use of alcohol on duty. Among the limited number of users of marijuana as the typical drug, a larger percentage reported the use of marijuana on duty. Users of alcohol or marijuana on duty tended to deny that it affected their job performance. However, comments on adverse job performance effects from the use of selected drugs (alcohol, marijuana, heroin) were expressed both by men who had observed drug use on duty and by men who had not observed such use.

There appeared to be limited knowledge about the effects of heroin use on performance. Marijuana use was less often cited as causing adverse cognitive or reaction time effects than alcohol or heroin, after controlling for the relative numbers of persons possessing information about the respective drugs. A small percentage of the sample reported having experienced a drug "flashback," although a slightly higher percentage reported having observed men having "flashbacks" on duty.

There was considerable variation in the actual and perceived drug attitudes of selected reference groups. Enlisted men in the lower pay grades were perceived as liberal about drug use, whereas career enlisted men (NCOs) were perceived as conservative. Junior officers were perceived as more liberal than senior officers. In a comparison of actual attitudes of lower-grade enlisted men and of a limited number of NCOs and junior officers, career enlisted men tended to be more conservative in their attitudes toward drug use and users than were either the lower-grade enlisted men or the junior officers.

The majority of the sample had heard of the DoD exemption program. Approximately one-half of the sample had heard of the VA program for drug rehabilitation. However, there was some evidence of confusion regarding local drug rehabilitation programs. For example, servicemen at some sites claimed to have heard of a local drug rehabilitation program when, in fact, no such program was in existence.

CONCLUSIONS

Implications for the Department of Defense

(1) The mechanism of personal interviews utilizing consultant age-peers as interviewers is a valuable method for the assessment of attitudes and knowledge about nontherapeutic drug topics, particularly among younger enlisted men. Personal interviews also add an important perspective in program evaluation.

(2) The use of alcohol, both on and off duty, would appear to constitute a military manpower problem at least as significant as the use of marijuana.

(3) Previous drug education programs do not appear to have been effective in communicating the performance effects of heroin use to servicemen. However, drug education in some form does appear to have functioned to provide information to servicemen about the effects of using alcohol and marijuana.

(4) Efforts to increase awareness of local drug rehabilitation services and facilities among servicemen appear desirable. Formal communication between supervisor and subordinate on the subject of drugs should be corrected. Differences in drug attitudes of career enlisted men and non-careerists should be considered in efforts to improve communications on drug-related topics.

(5) A high degree of awareness of the existence of the DoD drug exemption program is observed. A lower rate of awareness of Veterans Administration programs was found.

Implications for Further Research

(1) Periodic personal interviews using consultant interviewers should be employed in the evaluation of DoD and Armed Forces programs and policies for drug abuse control.

(2) A comprehensive study of the use of alcoholic beverages in the Service should be performed. Included as potential topics could be (a) estimated rates of use of the substance, (b) reward systems that facilitate and encourage the use of alcohol, and (c) attitudes toward alcohol control vis-a-vis the control of illicit drugs.

(3) A rigorous evaluation of military drug education programs appears desirable. The study should provide controls for (a) personal drug experience and (b) knowledge gained through the observation of drug use.

(4) The apparent disparity in attitudes toward drugs held by careerist and non-careerist enlisted men is worthy of extensive additional analysis. The extent of unilateral communication from supervisor to subordinate about drug use also merits further study.

(5) Efforts to increase awareness of local drug rehabilitation programs should be evaluated periodically by on-site survey research and personal interview techniques.

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**Analyses of Selected Drug-Related Topics:
Findings From Interviews at
Four Armed Service Locations**

INTRODUCTION

This report describes activities performed in a second, parallel phase of a two-phase project¹ with an overall objective of investigating the utilization of nontherapeutic drugs in the Armed Forces. Phase I of the project involved a worldwide survey of the illicit use of drugs among enlisted personnel. In Phase I, an anonymous, fully structured questionnaire was developed for administration to a representative sample of men from the Army, Navy, Marine Corps, and Air Force. Phase II of the project encompassed the study of selected drug-related topics in more detail than was permitted by the fully structured Phase I questionnaire. Phase II activities involved personal interviews to probe reasons for drug use, attitudes toward drug use, and the reported effects of drug use on military performance.

MILITARY PROBLEM

The phenomenon of drug abuse among the youth of America has particular ramifications for the Armed Forces. A continuing program of recruitment is essential to maintaining the enlisted force structure, and the source of this manpower is the civilian youth culture. Civilian youth may enter the military services with patterns of illicit drug use and with favorable attitudes toward experimentation with nontherapeutic drugs. Military service may bring exposure to illicit drugs, for example, heroin in Vietnam. To the extent that drug abuse impedes performance of military duties, the military services must take action to control the use of nontherapeutic drugs and to rehabilitate drug users. The rehabilitation objective was reinforced by recent Presidential guidance precluding the discharge of drug addicts into civilian society.

The Armed Forces have recently implemented programs for the identification and treatment of men with drug problems. Urinalysis techniques for the identification of current cases of use of certain drugs must be supplemented by other techniques to provide comprehensive estimates of the current and historic use of major classes of drugs, and to identify the demographic correlates of drug abuse. Further, new evaluation research methodologies must be developed to assess the effectiveness of military drug rehabilitation programs and to determine conditions that contribute to the success of these programs.

RESEARCH PROBLEM

Estimation of the magnitude of the problem of nontherapeutic drug utilization among military personnel required the use of a research methodology applicable to a worldwide population on a practical, responsive basis. The mechanism of a Department of Defense sample survey was selected as an expeditious solution to the problem. The sample survey approach, using an objective/multiple-choice format affords an efficient administration and tabulation capability. Anonymity provides a degree of protection to

¹ HumRRO Work Unit DELTA, DoD Nontherapeutic Drug Usage Survey and Research.

the subject, protection deemed of major importance in the study of such a sensitive topic as illicit drug use. Finally, random sampling procedures can be used in the selection of subjects to assure that the results of the survey are representative of personnel in the Armed Forces on a worldwide basis.

For these reasons, a DoD-wide anonymous "Survey of Drug Use: 1971" was designed to accomplish the following objectives: (a) determine rates of nontherapeutic drug use; (b) identify demographic correlates of nontherapeutic drug usage; and (c) identify aspects of the drug problem especially important to the services, such as reported use of drugs on duty, willingness to admit to having a problem with drugs, and willingness to volunteer for drug rehabilitation. The design and performance of the DoD Survey of Drug Use constitute Phase I of this research effort.

Exploratory study of other drug-related topics, including initial efforts to develop evaluation measures to appraise the effectiveness of military drug rehabilitation activities, necessitated the use of a less structured research methodology. The mechanism of personal interviews was selected as the basis for addressing these objectives. A semi-structured personal interview guide was developed to probe selected topic areas. A legal statement was obtained assuring subjects they were protected from prosecution as regards their reports of drug use. Field interview teams composed of young men with military experience were selected and trained to conduct the interviews.

One sample interviewing site in the continental United States (CONUS) was selected for each of the military services, and a limited number of interviews were conducted with enlisted and officer personnel at each site. Results, while *not* representative of the entire Service, do provide valuable initial contributions to the study of selected drug topics. The design and performance of the personal interview research constitute Phase II of this research effort.

Initial findings of the Phase I Survey of Drug Use are described in HumRRO Technical Report *Preliminary Findings From the 1971 DoD Survey of Drug Use* (Fisher, 1972). The activities and major results of Phase II are described in the present report.

DESCRIPTION OF PHASE I

Activities in Phase I included (a) the collection of anonymous drug use questionnaires developed by civilian and military drug experts, (b) development of a 73-item multiple-choice "Survey of Drug Use: 1971," (c) pretest and revision of the instrument, (d) design of an optical-scan (OPSCAN) answer sheet, (e) design of a DoD-wide sampling plan, (f) generation of a detailed data analysis and reporting plan, (g) preparation of data analysis programs, (h) conduct of initial data analyses as stipulated in the data analysis plan, and (i) preparation of a technical report of the initial findings.

Initial findings of the survey are summarized in the technical report. A series of computer tabulations of the data has been separately provided for DoD review.

PHASE II

Activities accomplished in Phase II included (a) selection of the CONUS interview sites to include interviews with members of each branch of the Armed Forces, (b) design of a semistructured personal interview guide, (c) performance of interviews at the designated CONUS locations, (d) data analysis, and (e) preparation of a technical report of the findings. This report satisfies the final objective. The content of the interview guide is

described in this section. Other details of the Phase II research are described in the following sections.

The personal interviews were conducted to extend the scope of the investigation of selected Survey of Drug Use: 1971 topics for which the fully structured questionnaire approach with multiple-choice items was deemed inappropriate or of limited application. Also, the mechanism of a semistructured, probing interview guide was employed in exploration of certain topics not addressed in the Survey of Drug Use: 1971, for example, subject awareness of Veterans Administration drug rehabilitation programs and of the DoD exemption policy, and topics of local interest for which an interviewer had to modify question content to elicit a meaningful response, as in the case of the name and location of the local drug rehabilitation complex. In the probe interviews, verbatim descriptions of the attitudes toward drugs attributed to members of various reference groups were collected, and details of drug-related job performance effects were elicited. Survey of Drug Use: 1971 explorations of selected topics, such as reports of the effects of "flashbacks" and reasons for the initial use of drugs were extended.

It is useful to compare two levels of analysis in description of the content of the personal interview guide. The following topics were designated for study through personal interviews:

- (1) Motivations underlying drug use.
- (2) Perceived positive and negative effects of drug use.
- (3) Anecdotal evidence of performance deterioration among users (if any) and its recognition by superiors.
- (4) Assessment of drug knowledge and attitudes of reference groups.
- (5) The drug user's knowledge of, and attitudes toward, Service rehabilitation programs.

Table 1 compares the scope of investigation of these topics used in the personal interview guide and in the Survey of Drug Use: 1971.

As Table 1 indicates, a limited scope of investigation of these particular topics was used in the Survey of Drug Use: 1971, where the major emphasis was the study of nontherapeutic drug utilization and identification of the demographic correlates of drug use. In contrast, the personal interview phase addresses the other drug-related topics in more detail. The results of analyses of findings for these topics are summarized in this report.

Table 1
Comparison of Selected Topics in the Survey of Drug Use: 1971
and the Personal Interview

Selected Topics	Survey of Drug Use (Phase I) (Structured/Anonymous)	Personal Interview Research
Motivations underlying drug use.	One item on reasons for the first use of marijuana or some other illegal drug (Q18).	Structured alternatives and probes on reasons for initial drug use as a civilian or in the service.
Reported positive and negative effects of drug use.	One item on the effects of drug use on job performance (Q16).	Global assessment of drug effects, structured and probe; effect on job performance, structured and probe; "flashback" experience.
Anecdotal evidence of performance deterioration among drug users.	One item on whether a man who uses marijuana on duty can be relied on to do his job properly (Q35).	Probing questions on the job performance effects of (1) marijuana, (2) heroin, and (3) alcohol usage; probe on the effects of observed "flashbacks" on duty.
Assessments of drug knowledge and attitudes among reference groups.	One item on the drug attitude of the respondent's immediate supervisor (Q15).	Probe on whether one's immediate supervisor has expressed an opinion about drug use; items on the perceived and actual drug attitudes of selected reference groups.
Knowledge of, and attitudes toward, Service rehabilitation programs.	Items on willingness to volunteer for drug treatment (Q13, Q14); admitted need for help (Q17); preferred confidant about a drug problem (Q22).	Questions on the awareness of local rehabilitation programs, assumed effectiveness, and probes on location and administration details; questions on awareness of the exemption program, and willingness to extend time in Service for drug treatment; awareness of VA programs.

METHOD

SELECTION OF THE INTERVIEW SITES

Interview sites were selected to represent each branch of the Armed Services, a total of four sites in CONUS being selected.¹ A pretest was conducted at an additional site.² The four major interview sites and the schedule of interviews follow:

<u>Service</u>	<u>Site</u>	<u>Interview Schedule</u>
U.S. Army	Fort Knox, Kentucky	27 Sep 71 — 1 Oct 71
U.S. Navy	Norfolk, Virginia	12 Oct 71 — 15 Oct 71
U.S. Air Force	Randolph Air Force Base, Texas	12 Oct 71 — 15 Oct 71
U.S. Marine Corps	Camp Lejeune, North Carolina	18 Oct 71 — 22 Oct 71

These interviewing sites were selected because each could provide a substantial population of permanent party personnel possessing "typical" military occupational skills. It was considered vital to interview such personnel, rather than either new trainees with limited military experience or men in highly specialized military occupations atypical of the Service, to ensure that interviewee information on the effects of drug use on military job performance would be based on observation of men performing typical duties in the Armed Services.

It is important to note that personal interview findings should *not* be interpreted as representative of the Department of Defense or of the several branches of the Armed Services from which they were obtained. These findings are based on only limited numbers of interviews conducted at the selected sites, so results are considered provisional. However, the results do appear to indicate the feasibility of analyzing certain key topics in the domain of drug abuse through the mechanism of personal interviews.

DESCRIPTION OF THE SAMPLE

In general, the samples generated by the respective Services for field interviewing satisfied the requirements of the study.

Sample Requirements

Each interview site was requested to provide a representative sample of male personnel to be interviewed. The Services were encouraged to select interviewees on a random basis (e.g., by Service Number or Social Security Account Number, SSAN). Requirements by pay grade were stipulated for each interview site. Numeric requirements are summarized in Table 2.

¹ Following Army Research Office guidance, interviewing locations were limited to the continental United States (CONUS).

² The pretest interviews were conducted on 17 Sept 71 at Fort Meade, Maryland. The interview guide was found to be adequate and only minor modifications were made prior to production of the current version.

Table 2

Number of Interviewees Required

Pay Grade ^a	Army	Navy	Marine Corps	Air Force
E1-3	40	31	40	31
E4	8	6	8	7
E5	7	6	7	6
E6	6	5	6	4
E7-9	5	3	5	3
O1-2	4	3	4	3
Total N	70	54	70	54

^aE = Enlisted; O = Officer

The Army and the Marine Corps each were requested to provide 70 interviewees, while the Navy and the Air Force each were requested to provide 54. The difference in interview requirements was simply a function of the number of days in each interview week. In total, 248 interviewees were requested of the Armed Forces.

Sample Characteristics

The four Services actually provided a combined total of 230 men as subjects for the personal interviews. Table 3 indicates the number of interviewees and their pay grade distribution, by Service. The pay grade distributions were consistent with the desired specifications; there were no differences of statistical significance between the desired and actual pay grade distributions for any of the Services.

Table 3

Pay Grade Distribution of Interviewees by Service

Pay Grade	Army		Navy		Marine Corps		Air Force		Totals	
	N	%	N	%	N	%	N	%	N	%
E1-3	40	57	28	52	34	56	27	60	129	56
E4	8	11	9	17	7	12	6	13	30	13
E5	7	10	6	11	5	8	5	11	23	10
E6	6	9	5	9	6	10	3	7	20	9
E7-9	5	7	3	6	5	8	3	7	16	7
O1-2	4	6	3	6	4	7	1	2	12	5
Totals	70		54		61		45		230	

The methods used in selection of interviewees also merit mention. Although each Service was requested to draw a random sample, the actual sampling procedures used varied among the Service locations. Table 4 contrasts the sampling procedures used at each location and defines the various populations.

Table 4

Sample Generation Procedure and Populations

Service	Method of Drawing Sample	Population
Army	Manual selection from four commands at Fort Knox	194th Armored; Support Brigade; 1st AIT; 2nd AIT
Navy	Manual selection from selected commands in the Norfolk Naval Complex	NAVSTA NORVA, NAS, D&S, U.S. Second Fleet
Marine Corps	Manual selection process from Camp Lejeune MCB with approximately 20% of personnel from Sub-Unit 2 (disciplinary action pending)	H&S Bn, MCES, Rifle range, ITR, MCSSS, Base Materiel
Air Force	Random selection based upon SSAN, computer file extract of Randolph AFB personnel	All base personnel (Computer file)

For the Air Force, a random selection procedure was used. However, the procedures used by the other Services to select interviewees were not necessarily random. The precise extent of the deviation from a random sampling procedure is unknown. Further, in the case of the Marine Corps, even the population base appeared slightly weighted toward the inclusion of men with disciplinary problems.

Inter-Service Sample Comparisons

The Service samples were compared on a variety of demographic characteristics in addition to pay grade. Analyses were performed on (a) age, (b) race, (c) current use of drugs, (d) use of marijuana either in the military service or as a civilian, (e) level of education at entry, and (f) recent duty overseas.¹

No significant differences were found among the interviewees by Service in terms of age, race, or current use of drugs. Differences *were* found between the Services on educational level at entry, recent overseas duty, and ever having used marijuana. The Army and Marine Corps samples included more non-high school graduates than did the other Services. There was a higher report of marijuana use at any time among the Marine Corps and Army interviewees than among representatives of the other Services. However, it should be recalled that *current* drug use did *not* differ between Services.

Interviewees in the Navy and the Marine Corps cited a higher rate of overseas duty assignment in the past two years than did men in the other Services. A higher rate of duty in Southeast Asia was reported by the Marine Corps sample. A higher rate of duty in Europe, or in both Europe and Southeast Asia, was reported by Navy interviewees, undoubtedly reflecting the East Coast (Atlantic Fleet) Navy site.

In summary, aside from the slight bias in the Marine Corps sample, there were only minor differences in the samples from the various Services, other than on parameters

¹ Appendix A contains the detailed results of these analyses.

associated with the inherent differences between Service populations (e.g., education requirements for enlistment, or current duty location).

INTERVIEW ADMINISTRATION

Three topics are germane to a description of the interview process: (a) the selection and training of the interviewers, (b) arrangements for conducting the interviews, and (c) data-coding procedures.

Selection and Training of Interviewers

A two-man interview team, consisting of a team leader (interviewer) and a second interviewer, was provided for each site. Team leaders were full-time employees of the Human Resources Research Organization (HumRRO), who had substantial interviewing experience.

Each interviewer was selected against three major criteria: (a) knowledge of drug topics, (b) recent military experience, and (c) youthful age and appearance. The final criterion was imposed to expedite the building of rapport for the interview, since most interviewees were young enlisted men who would, presumably, relate better to their peers. Vietnam-era military experience was required for building rapport and ensuring that interviewers could discuss military job duties and other military topics intelligently with the interviewees. Drug knowledge was deemed essential in interpretation of interviewee comments about drugs, because of the jargon frequently employed by members of the drug culture.

Interviewers were carefully trained in the administration of the interview guide. An intensive two-day training session that included role-playing was conducted to familiarize each interviewer with the content of the interview guide. Each interviewer was encouraged to develop his own approach and to be flexible, especially in his opening comments and in requesting the interviewee's cooperation in providing information on the desired topics. This flexibility was desirable in order to maximize rapport and communication with the interviewee on the sensitive drug usage topics. The importance of an informal atmosphere in facilitating drug research was mentioned by M.D. Stanton.¹

Prior to the interview, interviewees were assured that their responses would be kept in strict confidence. A statement from the Bureau of Narcotics and Dangerous Drugs of the Department of Justice accorded HumRRO interviewers privileged communication in the performance of this research. This statement (reproduced in Appendix B) was shown to interviewees.

Arrangements for Conducting the Interviews

Before the arrival of the interview team, Service-designated points of contact at each site were introduced to members of the interviewer team by telephone, and arrangements were made for the interviewers' visits. Details of the research project were explained and questions about the research were answered.

The principal investigator explained to the point of contact that the interview team would discuss the project with command personnel before starting on-site interviews, and that a general debriefing session would be conducted after the interviews were completed.

Finally, the requirement that each site complete an Installation Information form was explained. The form identified and described installation programs for drug education and rehabilitation, and provided a factual basis for the interpretation of interviewee responses to questions about local drug problems.

¹ Personal correspondence to Dr. Allan H. Fisher, Jr., HumRRO, June 1971.

Each interview site was requested to provide two small, private rooms for use during the one-week interview periods. Each interviewee was scheduled for a period of one hour. Individual interviews were performed with only one interviewer and one interviewee present in each room so two separate interviews were in progress simultaneously.

Data Coding Procedures

Interviewers recorded the responses and verbatim comments of each interviewee in the semistructured interview guide. At the end of each interview, each interviewee was encouraged to review these notes for authenticity, and when requested by the interviewee, changes were made to ensure accuracy.

DATA ANALYSIS

A variety of techniques were employed in the analysis of these data, including: (a) computer-based statistical analyses of precoded data, (b) tabulations of content-analyzed free responses, and (c) transcriptions of verbatim responses.

Most of the precoded information was transcribed into a coded format for computer processing. An abbreviated (80-character) record was created including these data. Coded data were then keypunched at the HumRRO Computer Center (HCC) and then analyzed, using frequency distribution and contingency table analysis routines resident in HCC (Dixon, 1970).

Much of the information elicited in the interview was "free-response" (open-end response) and hence not precoded. Two approaches were used in the analyses of these data. First, for selected items, qualitative responses were reduced to a finite number of content categories, following the performance of a content analysis based on the first 70 interviews, and verified by an independent analysis. The coders had previously functioned as drug interviewers, hence were thoroughly familiar with the content of the interview guide. The coders then employed the content codes to code each data case.

In addition, verbatim responses were transcribed for selected major items (effects of drug use on performance, "flashback" effects) to present the response of the interviewee in his own words. The bulk of these transcriptions appear as Appendices to this report. A minimum of demographic data is provided to assist in interpretation of each response, including in each instance: (a) branch of Service, (b) pay grade category, (c) age category, and (d) racial composition.

RESULTS

MOTIVATIONS FOR DRUG USE

One of the continuing complexities of the drug problem is what causes young persons to indulge in drug experimentation. Researchers have noted many reasons that contribute to drug use (Blum, *et al.*, 1970; Nowlis, 1971). It has even been suggested that drug use is irrational (Addington, 1971). Identification of the motivations for drug use is important in the Armed Services, particularly for those environments that satisfy the essential conditions for initiating drug use. It has been stated that there are two necessary factors for the starting of illegal drug use: access to illegal drugs, and settings that can be perceived as relatively safe for drug use (Blum, *et al.*, 1970).

Evidence that curiosity and use of drugs by friends contribute to initial drug use in Service was found in a recent, objective-item Army personal survey (Department of the Army, Office of Personnel Operations, 1970).

One objective of this research was to study reasons for initial drug use, across Services, using both structured and probing techniques. Two questions were posed to explore this topic: First, interviewees were asked what made them try the first non-therapeutic drug used as a civilian; second, they were asked what made them try the first drug used after they entered the service.

These probing questions were not asked of respondents who reported no non-therapeutic use of drugs, nor of respondents whose only drug use was alcohol. The intent was to maximize the elicitation of reasons for the initial use of drugs other than alcohol in two different environments, the civilian and the military.

Extent of Reported Drug Use

Other than alcohol, the majority of the men did not report any drug use either as civilians or in the military. Table 5 illustrates the reported use of drugs in the civilian and military environments.¹

The base for probing questions on reasons for initial drug use was the first drug reportedly used, in the civilian and in the military environments. Table 6 illustrates the distribution of first drug used in the two cases. Other than alcohol, the drug most frequently cited as "first used" was marijuana, in both the civilian and the military context. The highest percentage of first use for any drug other than alcohol and marijuana occurred for the use of amphetamines in the civilian environment, and was reported by only 10 cases (4.3%). This number is too small to provide stable information about reasons for drug use.

Reasons for Drug Use

The reasons for first drug use resolve into reasons for the initial use of *marijuana* in the two environments. A distribution of these reasons is presented in Table 7.

¹ Note that the Survey of Drug Use: 1971 is designed to investigate reported drug use in more detail than the interview research. Further, the formal survey employs representative samples of each of the Armed Services on a world-wide basis.

Table 5

Comparison of Reported Drug Use Before and During Service

Drug Category	Environment			
	Civilian		Military	
	N	% ^a	N	% ^a
Marijuana (pot, grass)	75	33	78	34
LSD, Peyote, mescaline, STP, psilocybin, other psychedelics	26	11	33	14
Cocaine (coke)	7	3	8	4
Amphetamines (Bennies, Dexies, Ups, Ritalin, Speed, Crystal)	36	16	26	11
Barbiturates (10's, Binnocals, Immenocotol)	15	7	17	7
Heroin (Smack, Scag, H)	8	4	13	6
Methadone	4	2	2	1
Morphine	3	1	2	1
Paregoric, Codeine, or Opium	14	6	9	4
Alcohol	206	90	209	91
Total N of Sample	230		230	

^aResponses exceed 100% because of multiple drug use.

Table 6

First Drug Used in Civilian and Military Life

Drug Category	Environment			
	Civilian		Military	
	N	%	N	%
Marijuana	63	27	66	29
Other Hallucinogenic Drugs (Hashish, LSD, etc.)	4	2	8	4
Cocaine
Amphetamines	10	4	3	1
Barbiturates	1	<1
Heroin	1	<1	3	1
Methadone
Morphine
Opium, Codeine, Paregoric
Alcohol	128	56	135	59
No Drugs Used	24	10	14	6
Total	230	100%	230	101%

Table 7

**Reasons for Using First-Used Drug (Marijuana)
In Civilian and Military Life^a**

Reason	Environment			
	Civilian		Military	
	N	%	N	%
"Social pressure"	6	8	2	3
"Curiosity"	54	86	25	38
"Friends used it"	22	35	11	17
"I was talked into it"	2	3	2	3
"Could not get alcohol"	1	2	--	--
"Boredom"	4	6	7	11
"Personal problems"	4	6	1	2
"To relax"	--	--	17	26
"To do my job"	--	--	1	2
"To enjoy myself"	--	--	28	42
Total	63		66	

^aBased on first-drug used response groups in Table 6. Note that responses exceed 100% because of multiple reasons.

The principal reasons cited for initial use of marijuana in civilian life were curiosity (86%) and friends' use of the drug (35%). Curiosity was also mentioned as a reason for the initial use of marijuana in the military by 38%, while the response "to relax" was given by 26%, and "to enjoy myself" by 42%.

The civilian use of marijuana constitutes pre-Service behavior, presumably initiated in the junior or senior high school peer group environments.¹ This conclusion would explain the mention of peer use/social pressure as factors, as well as the high rate of mention of curiosity. Among men who used marijuana in the Service, however, curiosity and peer usage are less frequently cited. Instead, a complex of military environment reasons are produced—for example, boredom, to relax, or to enjoy oneself.

In general, interviewees tended not to produce substantive, rational arguments for their initial use of marijuana. The reason "curiosity" often appeared to be used as a convenient answer to the question of why initial drug use began.

An attempt has also been made to characterize the flavor of the other reasons for drug use that were elicited in a secondary probe. Appendix C contains verbatim responses of interviewees in terms of reasons for drug use other than those in Table 7. Each comment is associated with the use of marijuana, and reasons are separately reported for drug use before Service and in Service.

¹ The Survey of Drug Use: 1971 was designed to study the age at which the first use of drugs is reported to have occurred among the Service enlisted populations.

Summary

The reported motivations for drug use were studied in terms of reasons for the initial use of marijuana both before entering the Service (pre-Service) and after entering the Service. Results may be summarized as follows:

(1) The extent of reported illicit drug utilization was approximately 33% for marijuana and 4% for heroin before entering the Service. Similar usage rates were reported for drug use after entering the Service. Other than alcohol, the first drug reportedly used was marijuana, in both civilian and military environments.

(2) The major reasons for the initial use of marijuana as a civilian were curiosity and peer use of the drug. The major reasons for initial use of marijuana in the Service were curiosity, personal enjoyment/relaxation, and, to a lesser extent, peer use of the drug.

(3) There was limited anecdotal evidence of the military environment contributing to drug use because of boredom and/or combat pressure.

REPORTED POSITIVE AND NEGATIVE EFFECTS OF DRUG USE

Another major topic in drug research is the type of effect that drugs have on their users. Other than for reasons of addiction, behavior theory suggests that the continued use of drugs requires the receipt of some positive effect on the user (Osgood, 1953). If the effects of drug use were universally negative, or if no effects were observed, there would be no continuation of drug utilization behavior. Therefore, it was deemed desirable to explore the range of subjective effects realized by drug users, with current drug use employed as the basis for this study.

Interviewees were first queried to determine the type of drug which they were currently using, including alcohol, and which drug they used most often. On the basis of this information, interviewees were classified into users of certain types of drug substances. They were then asked to both describe and rate the effects of drugs used—in general, and in terms of job performance. Finally, users of substances other than alcohol were asked if they had ever experienced flashbacks.

Results are first presented for the type of drug being currently used.¹ Results for each Service (Table 8) show the drugs most frequently used to be alcohol (72%) and marijuana (10%).

Global Effects of Drug Use

The users of marijuana or alcoholic beverages were each asked to provide a global assessment of the effects of drug use. Results for the total sample appear in Table 9. Differences in effects reported by alcohol and by marijuana users are statistically significant (tested by χ^2 , $p < .01$). The majority of men who claim to typically drink alcohol report its use as "mostly good" (59%). However, a higher percentage of those men who typically use marijuana report its use to be "mostly good" (96%).

Further insight into the effects of drug use are provided by the responses of interviewees to a question about the kind of effect they get from use of their current drug. A content analysis was performed on the data, resulting in seven major content categories. The distribution of responses, for each drug type used, appears in Table 10.

¹ Use in the last 30 days was stipulated whenever a respondent failed to provide a statement of current drug use employing his own definition of current use.

Again, more positive comments were recorded about the effects of marijuana than alcohol. More comments comparing marijuana use to the use of other drugs were made than were comments comparing alcohol use to the use of other drugs.

Table 8
Drug Typically Used at Present, by Service

Drug Category	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Alcohol	48	69	43	80	39	64	35	78	165	72
Marijuana	9	13	4	7	7	12	4	9	24	10
Other Psyche- delic Drugs	--	--	--	--	1	2	--	--	1	<1
Cocaine	--	--	--	--	--	--	--	--	--	--
Amphetamines	--	--	1	2	1	2	--	--	2	1
Barbiturates	--	--	--	--	1	2	--	--	1	<1
Heroin	--	--	--	--	3	5	--	--	3	1
Methadone	--	--	--	--	--	--	--	--	--	--
Morphine	--	--	--	--	--	--	--	--	--	--
Paregoric, Codeine, or Opium	--	--	--	--	--	--	--	--	--	--
No Drugs Used	13	18	6	11	9	15	6	13	34	15
Total	70	100%	54	100%	61	102%	45	100%	230	100%

Table 9
Subjective Global Assessments
of the Effects of Drug Use^a

Drug Effects	Drug Typically Used			
	Alcohol		Marijuana	
	N	%	N	%
Mostly Good	97	59	23	96
Mostly Bad	14	9	0	0
Both Good and Bad	54	33	1	4
Total	165	101%	24	100%

Significance of differences in effects reported by
alcohol/marijuana users, $p < .01$.

^aBased upon the type of drug most frequently used as shown in
the response groups in Table 8.

Table 10

Reported Effects of Drug Use Among Current Users^a

Reported Effects	Drug Typically Used			
	Alcohol		Marijuana	
	N	%	N	%
Positive effects	134	81	34	142
Negative effects	36	22	3	13
No effects	11	7	2	8
Effect depends on amount or situation	8	5	0	0
Descriptive responses only	30	18	9	38
Comparison of effects with other drugs	1	<1	7	29
Other comments	9	6	10	42
Total	165		24	

^aBased on the type of drug most frequently used, as shown in the response groups in Table 8. Responses exceed 100% because of multiple answers.

Job Performance Effects

The subjective effects of drug use on the ability to perform one's job were also studied. Each current drug user was asked to indicate how the use of his current drug affected his ability to do his job. Results in Table 11 are for the drug typically used. Differences in effects on job performance reported by alcohol and marijuana users are statistically significant (tested by χ^2 , $p < .001$).

Table 11

**Subjective Evaluation of the Effects of
Drug Use on the Ability to Perform One's Job^a**

Drug Effects	Drug Typically Used			
	Alcohol		Marijuana	
	N	%	N	%
"Improves my performance"	3	2	1	4
"Has no effect"	28	17	12	50
"Hurts my performance"	15	9	3	13
"Never use drugs on the job"	119	72	8	33
Total	165	100%	24	100%

Significance of differences in effects reported by
alcohol/marijuana users, $p < .001$.

^aBased upon the type of drugs most frequently used, as shown in the response groups in Table 8.

Users of alcohol typically reported no use of this drug on the job (72%). Among the 28% who reported drinking on the job, 61% claimed that drinking had no effect on their job performance. In contrast to the finding for alcohol, most users of marijuana reported use of the drug on the job at some time (67%). Among those men reporting the use of marijuana on the job, 75% claimed that marijuana use had no effect on their job performance. However, it should be noted that these percentages for marijuana effects are based on very few cases.¹

Additional insight into the subjective effects of drugs on job performance is given in verbatim transcriptions of the responses of interviewees to a probing question on the way drugs affect them on the job, presented as Appendix D of this report. The comments show extensive variability in reported effects. Some men claim that drug use "slows them down," some report no job performance effects, and a few interviewees indicated that drug use facilitated their job performance.

Personal Experience With "Flashbacks"

Current users of illicit drugs (excluding current users of alcohol) were asked if they had ever experienced "flashbacks" (i.e., the recurrence of a drug-induced effect without repeated administration of the drug). The results, in Table 12, by Service, show that only 14 (6% of the men) reported a "flashback" experience. Differences among Services are statistically significant (tested by χ^2 , $p < .05$).

Verbatim comments of men who have experienced a "flashback" are given in Appendix E. Some of these comments are of potential clinical significance. No attempt has been made to paraphrase or summarize these rare but rich verbalizations.

Table 12

Men Reporting a "Flashback" Experience^a, by Service

Flashback Experience	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	4	33	1	13	9	56	0	0	14	33
No	8	67	7	87	7	44	7	100	29	67
Total	12	100%	8	100%	16	100%	7	100%	43	100%

Significance of differences among Services, $p < .05$

^aBased upon current users of drugs, excluding current users of alcohol.

Summary

The basic findings on personal drug use may be summarized as follows:

(1) The drugs typically being used were alcohol (72%) and marijuana (10%). Few men (24) admitted to the current use of marijuana.

¹ It is instructive to compare these subjective reports of drug-induced performance effects with the reports provided by men who observed drug usage effects on duty, among their peers. See the following section.

(2) The subjective effects of marijuana use were more frequently described as unequivocally "good" by marijuana users than were the effects of alcoholic beverages as reported by users of alcohol.

(3) Most users of alcoholic beverages deny using alcohol on duty; users of marijuana are more prone to admit they use marijuana on duty.

(4) Most men who use either alcohol or marijuana on duty deny that use of the drug affects their job performance.

(5) There was limited evidence of the admitted experience of "flashbacks" among current users of drugs.

ANECDOTAL EVIDENCE OF PERFORMANCE DETERIORATION AMONG USERS OF SELECTED DRUGS

The job performance effects of drug use are a subject of military significance at least as important as extent of drug use and reasons for drug use. Limited research evidence of the use of drugs in combat locations was summarized by Morris D. Stanton,¹ in addressing the question of the combat effectiveness of drug users. The concept of "flashbacks"² also appears relevant to an appraisal of the job performance effects of nontherapeutic drug utilization. The complete eradication of drug use would be an essential goal, given substantial evidence of performance deterioration among drug users.

Conversely, if drug use is found to be largely an off-duty phenomenon involving the moderate use of "soft drugs" with minimal effects on subsequent job performance, a more moderate drug control objective might be appropriate (e.g., tolerance of the moderate use of alcohol or "soft drugs" such as marijuana). As yet, little definitive evidence has been accumulated on the military job performance effects of drug use. While negative publicity has accompanied occasional admission of the adverse effects of on-duty drug use, instances have been reported of "good performers" noted among previously undetected addicts in the Service (Holloway, 1971).

One objective of this research is to evaluate the extent to which the effects of drug abuse on duty have been observed, and to identify behavioral manifestations associated with drug use on duty. Three major types of drugs were employed for analysis: marijuana, heroin, and alcohol. Pertinent study parameters included (a) observation of drug use and (b) reported effects of drug use. A statistical procedure was used to control for the effects of observation and for the ability to report any drug effects, permitting comparison of the extent to which observers and non-observers of drug use agreed on the job performance effects of drug use, and of the extent to which men possessing any knowledge or opinions of drug effects agreed on them, independent of their observation of drug use on duty. This approach provides a method for assessing the effectiveness of drug education, where education is broadly defined to include both formal instruction and the informal acquisition of knowledge.

Each respondent was asked first if he had ever seen anyone using drugs on duty (or under the influence of drugs). Affirmative or negative response options were precoded for the three types of drugs—marijuana, heroin, and alcohol. A category was included that allowed the respondent to indicate his observation of on-duty behavior of men under the influence of other types of drugs.

¹ Stanton, M.D., "Drug Use in Vietnam" (unpublished report, 1970).

² A "flashback" is a recurrence of some of the features of the LSD state days or months after the last dose. It can be invoked by physical or psychological stress, or by medications such as antihistamines, or by marijuana (see National Clearinghouse for Drug Abuse Information, 1971.)

Extent of Observed Drug Use on Duty

Table 13 indicates the extent to which on-duty drug use has been observed by these respondents. The drug most frequently reported seen used on duty was alcohol (74%). Higher reports of the use of alcohol were obtained from men in the Army, Navy, and Marine Corps (ranging from 76% to 80%) than in the Air Force (58%). Observation of the use of marijuana on duty was reported by 37%, with higher reports by men in the Army (44%) and Marine Corps (51%) than by men in the Air Force (22%) or Navy (24%). Only 13% of the respondents reported observing the use of heroin on duty, while approximately 24% reported observing the use, on duty, of drugs other than marijuana, alcohol, or heroin.

The relationship of interviewee pay grade to the reported observation of drug use on duty is presented in Table 14 for three rank groups—E1-5, E6-9, and O1-2. Note that there are very small numbers of cases in the latter two rank groups.

There were no differences of statistical significance between the observation of marijuana, heroin, or other drug use on duty and the pay grade of the interviewee. However, Senior NCOs reported more observation of alcohol use on duty (89%) than Junior Officers (58%) or enlisted men in the lower pay grades (72%).

Table 13
Men Reporting Observed Drug Use on Duty for
Selected Types of Drugs, by Service

Drug Categories	Army		Navy		Marine Corps		Air Force		Total		p
	N	%	N	%	N	%	N	%	N	%	
Marijuana	31	44	13	24	31	51	10	22	85	37	<.01
Heroin	10	14	--	--	15	25	4	9	29	13	<.001
Alcohol	53	76	42	78	49	80	26	58	170	74	<.02
Any other drugs	16	23	14	26	21	34	5	11	56	24	<.05
Total	70		54		61		45		230		

Table 14
Percentage (by Pay Grade) Reporting Observed Drug Use on
Duty for Selected Types of Drugs
(percent)

Drug Categories	Pay Grade of Interviewee			Total (N=230)	p
	E1-E5 (N=182)	E6-E9 (N=36)	O1-2 (N=12)		
Marijuana	40	28	25	37	NS
Heroin	12	19	8	13	NS
Alcohol	72	89	58	74	<.05
Any other drugs	27	19	--	24	NS

Comparison of Job Performance Effects of Different Drugs

Each respondent was asked to describe the effect each of three drugs (marijuana, heroin, and alcohol) has on a man's job performance. The respondent was asked for a description even if he had *not* observed the use of the particular drug on duty, so that responses to these questions were obtained from the entire sample.

A content analysis was performed to develop 10 major comment categories. Responses were then categorized for each drug in terms of these content categories. Before considering the relationship between the observation of drug use and the estimate of drug use effects, it is useful to compare and contrast comments about the job performance effects of the three drugs for the entire sample (Table 15).

Table 15
Summary of Job Performance Effects From the Use of
Alcohol, Marijuana, and Heroin

Estimated Effects	Alcohol		Marijuana		Heroin	
	N	%	N	%	N	%
Job-Related Comments						
Adverse effects—cognitive and reaction time	150	65	92	40	64	28
Adverse effects—attitudinal and motivational	61	27	44	19	22	10
No effect	12	5	36	16	5	2
Improved job performance	3	1	16	7	1	<1
Personal Effects						
Negative	22	10	12	5	23	10
Positive	5	2	13	6	0	0
Individual differences	47	20	26	11	4	2
Comparison With Other Drugs	30	13	19	8	13	6
Other Comments	20	9	11	5	12	5
Don't Know	25	11	70	30	150	65
Total N	230		230		230	

Most of the men provided some descriptive comment about the effects of alcohol on job performance—only 11% of the sample said "Don't Know." Most also provided some descriptive comment about the performance effects of marijuana use, only 30% replying "Don't Know." However, in sharp contrast, 65% responded "Don't Know" to the question on the performance effects of heroin use. It should be recalled that only 13% of the interviewees reported the actual observation of heroin use on duty, compared to 37% for marijuana and 74% for alcohol, as shown in Table 14.

The use of alcohol on duty was typically described as detrimental to job performance. Of the interviewees, 65% said that the use of alcohol interferes with reaction time and cognitive processes, and 27% said that men under the influence of alcohol show poor

attitudes and low motivation. The use of marijuana on duty was also typically described as adversely affecting job performance; 40% said that it interferes with reaction time and cognitive processes and 19% that users of marijuana tend to exhibit poor attitudes and low motivation. The use of heroin on duty was typically described as adversely affecting job performance. Twenty-eight percent of the interviewees reported that it interferes with reaction time and cognitive processes and 10% said that users of the drug display poor attitudes toward the job. The limited extent of observation of the use of heroin on duty (compared with marijuana or alcohol) presumably contributed to the relative paucity of comments about the observed performance effects of heroin use.

It is noteworthy that 7% of the sample claimed that the use of marijuana on duty facilitates job performance, while 16% said it has no effect on job performance. In contrast, only 3 interviewees (1%) claimed that the use of alcoholic beverages improves job performance and only 5% said that it has no effect. There was negligible mention of the use of heroin facilitating job performance (less than 1%) or of its having no effect on job performance (2%) (in the latter case, the "no effect" comment was contingent on the continuing availability of heroin to the user).

There was some mention that the use of alcohol or of heroin would cause personal harm or damage to the user (10%, in each case). In contrast, there were fewer mentions of marijuana causing personal damage or harm to the users of the drug (5%).

There was virtually no report of individual differences in job performance resulting from the use of heroin. Only 2% mentioned any variability in behavior as a function of the person, the dosage, or the job *per se*. In contrast, 20% of the sample mentioned individual variability in the effects of alcohol use, and 11% mentioned individual variability in the job performance effects of marijuana utilization.

Relationship of Observed Drug Use to Reported Drug Effects

For analysis purposes, responses were also tabulated separately for men who observed drug use on duty and for men who had not seen the respective drugs used on the job. Results are presented for each drug separately.

Effects of Alcohol on Performance

The relationship between observing the use of alcoholic beverages on duty and estimating the effects of drinking on duty is presented in Table 16. There were certain noteworthy differences in the comments about alcoholic consumption on duty as a function of the observation of drinking on duty. Men who had observed drinking on duty were more likely to cite adverse cognitive and reaction time effects (71%) and to mention adverse effects of an attitudinal/motivational nature (30%) than did men who had not observed drinking on duty—48% and 17% for the two types of adverse effects.

Effects of Marijuana on Performance

The relationship between observing the use of marijuana on duty to the estimate of marijuana usage effects is given in Table 17. In general, there were consistent differences in the descriptions of marijuana effects on job performance as a function of the observation of its use. Men who had observed the use of marijuana on the job were more likely to claim that its use causes adverse cognitive or reaction time effects (52%) than were men who had not seen the drug used on the job (33%). However, among men who observed marijuana use on duty, a higher percentage claimed that marijuana use facilitates performance (14%) than did men who had not seen the drug used on duty (3%). Observers of marijuana use on duty were also more likely to claim the drug has no effect on performance (25%) than were men who had not witnessed the use of marijuana on duty (10%).

Table 16

**Estimate of Job Performance Effects From Use of Alcohol on Duty,
by Observation/Nonobservation of Drinking on Duty**

Estimated Effects	Drinking on Duty				Total	
	Seen		Not Seen			
	N	%	N	%	N	%
Job-Related Comments						
Adverse effects—cognitive and reaction time	121	71	29	48	150	65
Adverse effects—attitudinal and motivational	51	30	10	16	61	27
No effect	11	7	1	2	12	5
Improved job performance	3	2	--	--	3	1
Personal Effects						
Negative	13	8	9	15	22	10
Positive	4	2	1	2	5	2
Individual differences	41	24	6	10	47	20
Comparison With Other Drugs	24	14	6	10	30	13
Other Comments	18	11	2	3	20	9
Don't Know	3	2	22	37	25	11
Total N	170		60		230	

Effects of Heroin on Performance

The relationship between the observation of heroin use on duty and the job performance effects of heroin utilization is shown in Table 18. There were major differences in comments as a function of the observation of heroin use on duty. Men who had seen heroin used on duty were more likely to mention adverse effects on cognitive processes or reaction time (76%) than men who had not seen the drug in use (21%). Men who had observed heroin use on duty were also more likely to mention adverse attitudinal or motivational effects (28%) than those who had not (7%).

Adjustments for "Don't Know" Responses

A consistent phenomenon was noted for the descriptions of drug-related job performance effects of each type of drug—the percentage of "Don't Know" responses was much higher for interviewees who had *not* observed the respective drugs in use on duty than for those who had. For example, the "Don't Know" rate for persons who had not observed alcohol in use was 37%, compared to 2% for persons who had (Table 16). The phenomenon was also found for descriptions of the performance effects of marijuana and heroin.

A statistical step was performed to determine the effect of basing the descriptions of drug-related job performance effects on only the number of persons who produced a description (i.e., discounting those individuals who said "Don't Know"). In this operation, the "Don't Know" responses were deleted from the totals, and the response percentages were recomputed based on the adjusted totals. The results of this adjustment are shown in Table 19.

Table 17

**Estimate of Job Performance Effects From Use of Marijuana on Duty,
by Observation/Nonobservation of Using Marijuana on Duty**

Estimated Effects	Using Marijuana on Duty				Total	
	Seen		Not Seen			
	N	%	N	%	N	%
Job-Related Comments						
Adverse effects—cognitive and reaction time	44	52	48	33	92	40
Adverse effects—attitudinal and motivational	26	31	18	12	44	19
No effect	21	25	15	10	36	16
Improved job performance	12	14	4	3	16	7
Personal Effects						
Negative	5	6	7	5	12	5
Positive	8	9	5	3	13	6
Individual differences	8	9	18	12	26	11
Comparison With Other Drugs	7	8	12	8	19	8
Other Comments	4	5	7	5	11	5
Don't Know	3	4	67	46	70	30
Total N	85		145		230	

With the statistical adjustment, the "Seen" and "Not Seen" percentages tend to shift in the direction of equivalence, more than indicated by the preceding tables of this section. This finding is particularly evident for comments on the job-related adverse effects of drug use. The mention of adverse attitudinal and motivational effects are essentially equivalent for each drug, with only minor differences based on the observation of drug use.

The mention of adverse cognitive or reaction time effects is also equivalent for those who had and those who had not seen each drug in use. However, fewer adverse mentions based on cognitive dysfunction or slow reaction time were produced for marijuana than for alcohol or heroin, and a minor difference based on observation remains in the rate of comments for marijuana usage facilitating job performance. In this case, a slightly higher rate of mentions was made by men who observed marijuana in use on duty. With the exception of these findings for marijuana, there appears to be considerable agreement between interviewees on the job performance effects of various drugs, independent of the actual observation of drug use on duty—after deletion of individuals who report that they do not know what effects drugs have on performance.

Observations of "Flashbacks" on Duty

Each respondent was also asked to report if he had ever observed a man having a "flashback" on duty. The incidence of this behavior being observed was very low. Results, by Service, appear in Table 20. Only 10% reported observing a "flashback," the

Table 18

**Estimate of Job Performance Effects From Use of Heroin on Duty,
by Observation/Nonobservation of Using Heroin on Duty**

Estimated Effects	Using Heroin on Duty				Total	
	Seen		Not Seen			
	N	%	N	%	N	%
Job-Related Comments						
Adverse effects—cognitive and reaction time	22	76	42	21	64	28
Adverse effects—attitudinal and motivational	8	28	14	7	22	10
No effect	1	3	4	2	5	2
Improved job performance	1	3	1	<1
Personel Effects						
Negative	6	21	17	9	23	10
Positive
Individual differences	4	14	4	2
Comparison With Other Drugs	3	10	10	5	13	6
Other Comments	4	14	8	4	12	5
Don't Know	3	10	147	73	150	65
Total N	29		201		230	

Table 19

**Adjusted Percentages^a of Estimates of Selected Categories of Job
Performance Effects, by Type of Drug and Observation of Drug Use**

Estimated Effects	Alcohol		Marijuana		Heroin	
	Seen	Not Seen	Seen	Not Seen	Seen	Not Seen
	%	%	%	%	%	%
Job-Related Comments						
Adverse effects—cognitive and reaction time	72	76	54	62	85	78
Adverse effects—attitudinal and motivational	31	26	32	23	31	26
No effect	7	3	26	19	4	7
Improved job performance	2	..	15	5	4	..
Personal Effects						
Negative	8	24	6	9	23	32
Positive	2	3	10	6

^aThe "Don't Know" responses were subtracted from each N, and the percentages for each estimated effect for the three drugs were recomputed based on the revised Ns.

rate varying slightly between Services. The highest observed rate (18%) occurred for the Marine Corps, the lowest (6%) for the Navy, although the difference between the rates was not statistically significant (tested by χ^2 , $.20 > p > .10$).

In Appendix F are verbatim descriptions of on-duty flashback effects.

Table 20

Men Reporting the Observance of a "Flashback" on Duty

"Flashback" Observed	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	6	9	3	6	11	18	4	9	24	10
No	64	91	51	94	50	82	41	91	206	90
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Service differences, NS.

Summary

The findings on observed drug use and performance effects of drug use on duty may be summarized as follows:

(1) The use of alcoholic beverages on duty was observed by 74% of the sample, whereas observation of the use of marijuana on duty was reported by 37% and observed heroin use was reported by 13%.

(2) The majority of the sample (65%) did not know what effects heroin use would have on job performance. The rates for marijuana and alcohol were far lower, 30% and 11% respectively.

(3) The majority of comments for alcohol, marijuana, and heroin could be classified as denoting adverse effects on job performance in terms of cognitive dysfunction or slowness in reaction time. For marijuana, there was a slight tendency to mention "no effects" of drug use or even to claim that use of the drug-facilitated job performance.

(4) There was a tendency for the mention of adverse performance effects of drug use on duty to be higher for men who had observed drug use than for men who had not. However, this phenomenon disappeared after controlling for the relative numbers of interviewees possessing information or opinions of the effects of the respective drugs.

(5) There was an indication (10%) that drug "flashbacks" had been observed on duty. There was no difference between Service samples in the report of observation of this phenomenon.

PERCEPTIONS OF DRUG KNOWLEDGE AND DRUG ATTITUDES AMONG REFERENCE GROUPS

Attitudes toward drugs and drug users are of vital importance in the implementation of new programs of drug prevention and control. The importance of attitudes in the success of drug control and drug rehabilitation programs already in existence has been frequently noted (Hughes, 1971; Gard, 1971; Baker, 1971).

Differences in attitudes toward drugs among men in the various enlisted pay grades were found in a recent Army personnel survey. Compared to enlisted men in the upper

pay grades, fewer enlisted men in the lower pay grades claimed that the use of marijuana was harmful to health, or that drug abusers got into trouble more often than non-drug abusers (Department of the Army, Office of Personnel Operations, 1970). It is unreasonable to expect that equivalent attitudes toward drugs would be held by men in different pay grades, considering differences in age, education, and exposure to the drug culture. Nevertheless, some reconciliation of these attitudinal differences seems desirable, particularly since senior enlisted men must participate to some extent in programs of drug control and rehabilitation. Further, the need for communication about drugs between senior NCOs and younger enlisted men in the lower grades seems essential, if the career enlisted man is to provide information and assistance on this topic.

One objective of this study was to explore actual and perceived attitudes toward drugs, and to determine the extent to which communication about drugs has occurred. The topic of nontherapeutic drug utilization tends to evoke strong emotional attitudes. On the other hand, a lack of communication on drugs and other problems is often suspected between officers and enlisted men, or between senior NCOs and younger enlisted men. Two research approaches were designed—one to study the extent of unilateral communication about drugs from supervisor to subordinate, another to compare actual attitudes toward drugs with attributed (perceived) attitudes.

Since the Serviceman's perceptions of the drug knowledge or attitudes of his leaders and his peers may be as critical as their actual attitudes or knowledge in determining the success with which a Service can counter the abuse of drugs, a series of items were employed to elicit the perceived attitude toward drugs held by six reference groups:

- Medics
- Junior Officers (Lieutenants and Captains)
- Senior Officers (Majors and above)
- Senior NCOs (E6 through E9)
- Lower-grade enlisted men (E1 through E5)
- "Short-timers" (Men about to leave the active Service)

This section will first review the attitudes toward drug use attributed to each reference group and compare the results with the attitudes toward marijuana actually stated by members of selected reference groups. Next, the extent of reported unilateral communication on drug use from immediate supervisors to subordinates will be discussed.

Perceived Drug Attitudes

A four-point scale of attitudinal alternatives was presented for each reference group, with the question, "What do (members of the specific reference group) say about the use of drugs?" Responses from representatives of each Service are presented for the most frequently selected alternative "[They are] completely against drugs" (Table 21).

With the caveat that these percentages reflect *perceived attitudes*, and not necessarily fact, it is instructive to note certain consistencies in the data. In general, there were substantial differences in the perceptions of drug attitudes held by the various reference groups. For example, the total sample expressed the perception that Senior Officers (72%) and Senior NCOs (84%) are completely against drugs. Conversely, this attitude was infrequently attributed to enlisted men in the lower grades (5%), short-timers (8%), or even Medics (14%). Thirty percent of the interviewees felt Junior Officers were completely against drugs.

Some variations between Services in the perceived drug attitudes of selected reference groups are noteworthy. There was a stronger tendency among Navy than Army

¹ Alternatives included: (a) completely against drugs, (b) against hard drugs, but neutral about marijuana, (c) neutral about all drugs, and (d) for drugs. A "Don't Know" response was also included.

Table 21

**Percent of Selected Reference Groups Perceived to be
Completely Against Drugs, by Service**

Reference Groups	Army		Navy		Marine Corps		Air Force		Total		p^a
	N	%	N	%	N	%	N	%	N	%	
Medics	7	10	11	20	9	15	5	11	32	14	<.001
Junior Officers	28	40	14	26	18	30	10	22	70	30	<.01
Senior Officers	41	59	50	93	48	79	27	60	166	72	<.01
Senior NCOs	54	77	51	94	51	84	38	84	194	84	NS
Lower-grade enlisted men	4	6	2	4	2	3	4	9	12	5	<.001
"Short-timers"	3	4	3	6	8	13	4	9	18	8	<.01

^aSignificance of differences between Services.

interviewees to perceive members of the Senior NCO and Senior Officer groups as being against drugs. Further, there was more of a tendency among Army interviewees (40%) than Air Force interviewees (22%) to perceive Junior Officers as completely against drugs. Differences between Services achieved statistical significance for the Junior and Senior Officer items, but not for the Senior NCOs.

The tendency to perceive enlisted men in the lower grades as *for drugs* was stated by 43% of the total sample. There were statistically significant differences in attitude perception. The lowest rate of endorsement of this positive attitude toward drugs among enlisted men came from Air Force interviewees (18%), while the rate was 46% for the Army, 54% for the Navy, and 49% for the Marine Corps interviewees.

Structured attitudinal alternatives do not fully reflect the emotional content attributed to the various reference groups. To explore this matter, interviewers conducted probes of the perceived attitudes. A selection of verbatim comments provides examples of perceived antagonistic attitudes toward drugs attributed to Senior and Junior Officers and Senior NCOs, and examples of the liberal attitudes attributed to lower-grade enlisted men. With the exception of "Don't Know" responses, these quotations represent modal attitudinal responses for particular reference groups from the Services as noted.

Perceived Negative Attitudes

Examples attributed to Senior Officers include:

"[They are] too brainwashed—lost contact with reality—very unusual to see simple understanding." (Navy, E4, 17-21, White)

"They usually claim to be against drugs, but this may not be their personal opinion; rather a reflection of Army policy." (Army, O1-2, 22-23, White)

"They are from an older generation. They don't understand what is going on." (Army, E1-3, 17-21, White)

Some examples attributed to Senior NCOs are:

"They're the same as the Senior Officers. They've got their taboos and we've got ours. They are too old to break into it." (Navy, E1-3, 22-23, White)

"Many feel that if a man smokes one marijuana joint, he becomes addicted." (Army, E4, 22-23, White)

"They have seen deaths in combat caused by drug use." (Army, E1-3, 17-21, White)

Perceived Positive Attitudes

Some examples of perceived positive attitudes toward drug use attributed to lower-grade enlisted men are:

"[Lower-grade enlisted men are] a lot more tolerant due to exposure to drug users. Medic made it part of the youth cult." (Navy, E7-9, 35-39, White)

"[The] majority of guys on base will do anything to get high." (Navy, E1-3, 17-21, Black)

"They are not past the age where they want to experiment. It is more of an age thing." (Army, E1-3, 17-21, White)

"They feel marijuana is safer than alcohol." (Army, E1-3, 17-21, White)

"They have less to lose than anybody." (USMC, E1-3, 22-23, White)

"They like drugs. They have problems so they use drugs." (USMC, E1-3, 17-21, Black)

Prominent among the comments is the *generation-gap* problem, for example, the attitude that young enlisted men experiment with drugs much as the Senior NCO or Senior Officer may have experimented with alcohol in his early youth. Also noteworthy are the attributions of (a) an anti-drug attitude because of command responsibility, and (b) a positive aspect of drug use in terms of enjoyment and escape which is contrary to the "taboos" of the Senior NCOs as noted by one interviewee.

The extent to which members of each reference group attribute to their peers the same attitude toward drugs that others attribute to them was studied for selected grade groups E1-5, E6-9, and O1-2. However, the small number of cases in the upper pay grades limit inferences about them (Table 22).

Enlisted men in the lower pay grades tended to perceive their peers in the lower pay grades as more liberal toward drug use (3% against drugs) than did Junior Officers (8% against drugs) or NCOs (14% against drugs). Although the differences were not statistically significant, enlisted men in the lower grades also perceived Senior NCOs to be less conservative (81% against drugs) than did Junior Officers (100% against drugs) or NCOs *per se* (94% against drugs). Junior Officers perceived their Junior Officer peers as more liberal (25% against drugs) than did enlisted men (31% against drugs).

Relationship of Pay Grade to Drug Attitudes

The extent of congruence between perceived attitudes of selected reference groups and the attitudes actually espoused by members of these reference groups was also studied. A series of statements about the use of marijuana were employed as attitudinal

Table 22

**Percent of Selected Reference Groups Perceived To Be
Completely Against Drugs, by Reference Groups
(Percent)**

Actual Reference Groups	Selected Subject Reference Groups		
	Lower-Grade Enlisted Men (E1-5)	Senior NCOs (E6-9)	Junior Officers (O1-2)
E1-5 (N = 182)	3	81	31
E6-9 (N = 36)	14	94	31
O1-2 (N = 12)	8	100	25
Total (N = 230)	5	84	30
Difference between grade levels ^a	$p < .05$	NS	$p < .01$

^aTested by χ^2 .

measures, to which respondents replied "Yes," "No," or "Don't Know." Affirmative ("Yes") responses are summarized in Table 23 for three reference groups (E1-5; E6-9; and O1-2).

The findings indicate that a higher percentage of the men in the E6-9 pay grades consistently endorse a conservative position on marijuana usage than do either Junior Officers (O1-2) or enlisted men in the lower pay grades (E1-5). For example, virtually all the E6-9 interviewees thought that a Serviceman should be given a court-martial for the sale of marijuana, while far lower proportions of either Junior Officers or enlisted men in the lower pay grades thought so. These data, although based on small numbers of cases, suggest substantial congruence between the perceived drug attitudes of reference groups and their stated attitudes.

Behavioral Correlate of Drug Attitudes

The statements regarding attitudes toward marijuana utilization were analyzed against a composite criterion of the reported use of marijuana at any time (i.e., before entering the Service or while in the Service). In total, 45% of the interviewees reported the use of marijuana at some time in their lives. In Table 24 the attitudinal responses of these men is compared with the attitudes of the 55% of the sample who claimed never to have used marijuana.

There is a consistent, statistically significant difference between users and non-users of marijuana in their rates of endorsement of these selected attitudinal statements. For example, 80% of marijuana users endorse use of the drug off duty, whereas only 27% of non-users endorse the statement. Thus, a liberal attitude toward marijuana is seen as associated with reported use of the drug at any time.

Drug Communications

The extent to which immediate supervisors convey their drug attitudes to their subordinates was also studied. Each interviewee was asked if his immediate supervisor had ever said what he thinks about the use of drugs. This response was analyzed by Service

Table 23

**Percent Endorsing Selected Attitudes Toward the Prevention and
Control of Marijuana Use, by Pay Grade of Interviewee
(percent)**

Marijuana Attitude Statements	Pay Grade Category of Interviewee			Total (N=230)	p ^a
	E1-5 (N=186)	E6-9 (N=36)	O1-2 (N=12)		
Court-martial a Serviceman for possession of marijuana	19	50	25	24	<.001
Use drug treatment facilities to help marijuana users quit	42	67	58	47	<.05
Use drug education programs to get marijuana users to quit	42	72	67	48	<.01
Permit the use of marijuana off duty	59	16	33	51	<.001
Court-martial a Serviceman for the sale of marijuana	52	97	58	60	<.001

^aSignificance of differences between grade levels.

(Table 25). There was no statistically significant difference between Services in the rate to which the immediate supervisor was reported as having expressed his attitude toward drug use. However, there appeared to be a higher rate of downward communication on drugs reported by Navy interviewees.

The same question concerning communication on drugs was also analyzed by pay grade of the interviewee (Table 26). There was no statistically significant relationship between the report of supervisory communication on drug use and the pay grade of the interviewee (.50 > p > .30). However, men in the upper pay grades (E6 and above) tended to report more frequently that their immediate supervisor had expressed his attitude toward drug use than did men in the lower enlisted pay grades (E5 and below).

Summary

The basic findings of these analyses may be summarized as follows:

(1) Both Senior Officers and, particularly, Senior NCOs are perceived as very conservative in their attitudes toward drug use. Both Junior Officers and, particularly, enlisted men in the lower pay grades are perceived as more liberal in their attitudes toward drug use.

Table 24
**Percent Endorsing Selected Attitudes Toward the Prevention and
Control of Marijuana Use, by Any Report of Marijuana Use
(percent)**

Marijuana Attitude Statements	Ever Used Marijuana (N=104)	Never Used Marijuana (N=126)	Total (N=230)	p ^a
Court-martial a Serviceman for possession of marijuana	14	33	24	<.001
Use drug treatment facili- ties to help marijuana users quit	29	61	47	<.001
Use drug education pro- grams to get marijuana users to quit	22	70	48	<.001
Permit the use of marijuana off duty	80	27	51	<.001
Court-martial a Service- man for the sale of marijuana	37	79	60	<.001

^aSignificance of difference between users and nonusers.

Table 25
**Men Reporting Immediate Supervisor
Verbalized Attitude Toward Drug Use, by Service**

Supervisor Expressed Attitude Toward Drug Use	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	30	43	29	54	24	39	17	38	100	44
No	40	57	25	46	37	61	28	62	130	56
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Differences^a between Services, NS.

^aTested by χ^2 .

Table 26

**Men Reporting Immediate Supervisor Verbalized Attitude Toward
Drug Use, by Pay Grade of Interviewee**

Supervisor Expressed Attitude Toward Drug Use	Pay Grade Category of Interviewee								Total	
	E1-3		E4-5		E6-9		O1-2			
	N	%	N	%	N	%	N	%	N	%
Yes	50	39	23	43	20	56	7	58	100	44
No	79	61	30	57	16	44	5	42	130	56
Total	129	100%	53	100%	36	100%	12	100%	230	100%

Differences^a between pay grades, NS

^aTested by χ^2 .

(2) Attitudinal perceptions appear to have some basis in reality, in that Junior Officers and enlisted men in the lower pay grades are more likely to perceive their respective peers as liberal on drug use, while Senior NCOs are likely to perceive their peers as conservative on the subject.

(3) Compared to Junior Officers and enlisted men in the lower grades, Senior NCOs also tended to espouse more conservative positions on a variety of attitudinal statements concerned with the use and control of marijuana.

(4) There was substantial relationship between the use of marijuana at any time and the endorsement of liberal attitudes toward the use and control of this particular drug.

(5) There is a tendency for communication of drug attitudes from immediate supervisors to subordinates to be reported at a lower rate in the lower enlisted pay grades than it is at the upper enlisted pay grades, although the trend was not statistically significant.

KNOWLEDGE OF, AND ATTITUDES TOWARD, SERVICE DRUG REHABILITATION PROGRAMS

Another objective of this study was to examine the extent to which Servicemen were aware of current policies and programs for drug treatment and rehabilitation, as well as to determine their attitudes toward drug rehabilitation.

Compared to the time at which these interviews were conducted, the Armed Services drug control programs are of recent origin. However, the new policies and programs have been accorded extensive publicity, for example, in the Army Drug Abuse Prevention and Control Plan (Department of the Army, Headquarters, September 1971) and Navy drug policy (Bureau of Naval Personnel, September 1971). Publicity has also attended the anticipated increase in drug rehabilitation facilities by the Veterans Administration (Kaim, 1971). It is important to determine whether Servicemen are aware of these new Service-wide programs and policies, and to identify the extent to which they are aware of the services and facilities available to them at their current duty station.

A series of questions were employed to determine the current state of knowledge of local service drug rehabilitation program(s) among Servicemen, and to elicit their attitudes toward drug treatment. These questions were intended to indicate whether Servicemen have been informed of available drug rehabilitation services, and whether they are favorably predisposed toward using them.

Service Drug Rehabilitation Programs

The Armed Services have recently become actively involved in the implementation of drug rehabilitation programs. Although the Navy and Air Force initially chose to employ centralized rehabilitation programs, many major Service sites now maintain a "Half-way House" facility as well as other drug treatment, counseling, or education services.

At the time the interviews for this study were conducted, the Army had at Fort Knox 26 men involved in drug rehabilitation, the Marine Corps had 13 at Camp Lejeune, but there were no formal drug rehabilitation programs at either the Navy site at Norfolk or the Air Force site at Randolph AFB. However, centralized drug rehabilitation programs were in progress at Miramar Naval Air Station, San Diego, and at Lackland AFB, Texas, to which those in need of drug rehabilitation were referred.

Awareness of Local Military Drug Rehabilitation Programs

Each respondent was asked whether there was a drug treatment program on his post or base. The responses, which are shown in Table 27, are by location. There was a statistically significant difference between the Service locations in terms of reported awareness of a local drug rehabilitation program. For Fort Knox (Army) and Camp Lejeune (USMC) where there were drug rehabilitation programs, reported awareness of them was 44% for the Army and 57% for the Marine Corps. At Norfolk (Navy) and Randolph AFB (USAF), where there were no drug rehabilitation programs, reported awareness of a local drug treatment program was 26% for the Navy and 13% for the Air Force.

Table 27

Knowledge of Local Drug Treatment Program, by Location of Service

Know About Local Program	Army, Fort Knox		Navy, Norfolk		Marine Corps, Camp Lejeune		Air Force, Randolph AFB		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	31	44	14	26	35	57	6	13	86	37
No	0	0	8	15	11	18	25	56	44	19
Don't Know	39	56	32	59	15	25	14	31	100	44
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Significance of differences^a between Service locations, $p < .001$.

^aTested by χ^2 .

For the Marine Corps and Army, Services with local drug rehabilitation programs, the names of the programs were relatively unknown, even among those who claimed an awareness of the existence of the programs. Of the 57% of the Marine Corps sample that claimed to know of a drug treatment facility on base, only 9% were aware of the official name of the program (5% of the total Marine Corps sample). In the Army sample, only 10% of those who said there was a drug treatment facility on post knew the official name of the program (4% of the total Army sample).

There was obvious confusion among Air Force and Navy interviewees who indicated awareness of non-existent local drug programs. The Air Force interviewees typically referred to a local drug hotline program. The Navy interviewees typically mentioned the DoD drug exemption policy, as opposed to a specific local drug rehabilitation program.

The 86 men who indicated awareness of a local drug rehabilitation program were then asked two questions to probe their knowledge of the program. First, they were asked if they knew who was in charge of the program. Responses are listed in Table 28. More than half (54%) of those who reported awareness of a local drug rehabilitation program did not know who was in charge of it. Men at the Army and Air Force sites most often reported they did not know who was in charge of the local program. These differences achieved statistical significance.

Table 28

**Reported Awareness of Who is in Charge of
Local Drug Treatment Program, by Location of Service^a**

Know Who is in Charge	Army, Fort Knox		Navy, Norfolk		Marine Corps, Camp Lejeune		Air Force, Randolph AFB		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	3	10	3	21	11	31	1	17	18	21
No	24	77	4	29	13	37	5	83	46	54
Don't Know	4	13	7	50	11	31	0	0	22	26
Total	31	100%	14	100%	35	99%	6	100%	86	101%

Significance of differences^b between Service locations, $p < .01$.

^aBase is those who report knowing there is a local drug treatment program on post or base (Table 27).

^bTested by χ^2 .

Interviewees who claimed awareness of a local program were next asked if they knew the physical location of the rehabilitation site. The majority (60%) of those who reported awareness of a local drug rehabilitation program did not know the physical location of the program (Table 29).

In summary, not only was there confusion about the existence of a local drug program (e.g., at the Navy and Air Force sites), but also, the majority of men who claimed awareness of the existence of a local program did not know the physical location of the activity or the person in charge of the program.

The confusion over knowledge of the local drug program was apparently also reflected in an item about the perceived effectiveness of the local program. Responses are listed in Table 30. Most of the interviewees said they did not know whether the local program was effective or not (52%). An additional 33% thought that the program was not effective. There were no statistically significant differences between interviewees in the various Services in the distribution of these opinions.

Table 29

**Reported Awareness of the Physical Location of the
Local Drug Treatment Program, by Location (Service)^a**

Know Where Program Is Located	Army, Fort Knox		Navy, Norfolk		Marine Corps, Camp Lejeune		Air Force, Randolph AFB		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	7	23	7	50	18	51	2	33	34	40
No	24	77	7	50	17	49	4	67	52	60
Total	31	100%	14	100%	35	100%	6	100%	86	100%

Differences^b between Service locations, NS.

^aBase is those who report knowing there is a local drug treatment program on post or base (Table 27).

^bTested by χ^2 .

Table 30

**Perceived Effectiveness of the Local Drug
Treatment Program, by Location (Service)^a**

Is the Program Effective?	Army, Fort Knox		Navy, Norfolk		Marine Corps, Camp Lejeune		Air Force, Randolph AFB		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	5	16	2	14	4	11	2	33	13	15
No	6	19	3	21	15	43	4	67	28	33
Don't Know	20	65	9	64	16	46	0	0	45	52
Total	31	100%	14	99%	35	100%	6	100%	86	100%

Differences^b between Service locations, NS.

^aBase is those who reported knowing there is a local drug treatment program on post or base (Table 27).

^bTested by χ^2 .

Program Knowledge Among Drug Users

Although there appears to be confusion in the total sample over the existence of Service drug rehabilitation programs, it is vital to explore the state of knowledge among a potentially concerned subset of the total sample, that is, the admitted current user of drugs. Table 31 illustrates the relationship between current drug use and reported awareness of a local drug rehabilitation program. Although the number of cases of current admitted drug users is very small, there does appear to be a higher rate of claimed awareness of a local drug rehabilitation program among current users of illicit drugs such as amphetamines, barbiturates, or opiates.

Table 31

**Knowledge of Local Drug Treatment Program,
by Current Drug Usage Status**

Know About Local Program	Alcohol or No Drug Use		Use of Marijuana or Other Psychedelics		Use of Amphetamines, Barbiturates, or Opiates		Total	
	N	%	N	%	N	%	N	%
Yes	61	34	12	35	13	77	86	37
No	33	18	8	24	3	18	44	19
Don't Know	85	48	14	41	1	6	100	44
Total	179	100%	34	100%	17	101%	230	100%

Significance of differences^a between usage status groups, $p < .01$.

^aTested by χ^2 .

However, there were no statistically significant differences observed between the category of drug currently used and each of the following variables: (a) knowledge of program location; (b) knowledge of the person in charge of the program; and (c) opinion of the effectiveness of the local program.

Awareness of the DoD Exemption Policy

Each man in the sample was asked if he had heard of the drug exemption program, that is, the policy under which a Serviceman may volunteer for drug treatment without prosecution for drug use. The term for the program varies by Service, and the correct name was employed for each Service. Awareness of the program is shown in Table 32. The great majority (86%) of the men reported having heard of the program. There was no variation of consequence between Services, although a slightly higher level of awareness (93%) was reported by Marine Corps men. Further, there was no difference in program awareness as a function of the category of drug currently used, although all current users of amphetamines, barbiturates, or opiates said they had heard of the exemption program.

Table 32

**Percent Who Claim Awareness of the
Drug Exemption Program, by Service**

Heard of Exemption Program	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	58	83	45	83	57	93	37	82	197	86
No	12	17	9	17	4	7	8	18	33	14
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Differences^a between Services, NS.

^aTested by χ^2 .

Each member of the sample was also asked if he knew how to apply for treatment under the program, and 58% said that they did. Responses to this item for the total sample are given in Table 33. There was a statistically significant difference between Services, with the highest rate reported by men in the Marine Corps (77%), and the lowest rate in the Army (42%). No difference was observed as a function of the category of drug currently used. Among only those men who reported having heard of the exemption program, 66% said that they knew how to apply for admission under the program.

Table 33

**Men Reporting They Know How to Apply for
Treatment Under Exemption, by Service**

Know How to Apply	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	29	42	30	55	47	77	27	60	133	58
No	41	59	24	44	14	23	18	40	97	42
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Differences^a between Services, <.001.

^aTested by χ^2 .

Awareness of VA Drug Programs

A recent development in the field of drug rehabilitation is the announced expansion of the Veterans Administration (VA) drug treatment facilities. To determine whether Servicemen were aware of this development, each man was asked if he had heard anything about current VA programs designed to help Vietnam-era veterans with drug problems after they leave the service. Approximately half (51%) of the interviewees indicated that they had heard of the programs (Table 34). There was practically no difference between Services in this reported awareness.

Table 34

**Reported Awareness of Current Veterans Administration (VA) Programs
to Help Vietnam Veterans With Post-Service Drug Problems, by Service**

Heard of VA Drug Programs?	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	36	51	26	48	33	54	22	49	117	51
No	34	49	28	52	28	46	23	51	113	49
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Differences^a between Services, NS.

^aTested by χ^2 .

Attitudes Toward Drug Rehabilitation

Each respondent was asked whether he thought a person could stop using *hard drugs*, for example, a drug like heroin. Responses to this question appear in Table 35. The majority stated that they believed in the ability of a person to terminate the use of hard drugs (84%). The rate did not differ between Services.

Table 35

Men Believing That a Person Can Stop Using Hard Drugs, by Service

Can a Person Stop Using Hard Drugs?	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	62	89	43	80	51	84	38	84	194	84
No	8	11	11	20	10	16	7	16	36	16
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Differences^a between Services, NS.

^aTested by χ^2 .

It is interesting to examine the relationship between drug use (as exemplified by the use of marijuana at any time) and the attitude toward the suspension of hard drug use. Table 36 shows that there is no relationship between drug use and the attitude that hard drug use can be voluntarily terminated.

Table 36

Relationship Between Marijuana Use and Attitude Toward Terminating the Use of Hard Drugs

Can a Person Stop Using Hard Drugs?	Ever Used Marijuana		Never Used Marijuana		Total	
	N	%	N	%	N	%
Yes	85	82	109	87	194	84
No	19	18	17	13	36	16
Total	104	100%	126	100%	230	100%

Differences^a between groups, NS

^aTested by χ^2 .

Finally, each interviewee was asked if he would be willing to extend his time in service to receive a preferred form of drug treatment. The majority (60%) of interviewees indicated that they would extend their term of service in order to receive a preferred type of drug treatment (Table 37). However, there was a statistically significant difference between Services, with only 39% of Marine Corps interviewees expressing a willingness to extend compared to 82% of the Air Force men.

While the previous findings are perhaps germane as an appraisal of the perceived efficacy of Service drug rehabilitation programs among Servicemen, it is of particular

Table 37

**Willingness to Extend Time in Service to
Receive Preferred Drug Treatment Program, by Service**

Would you Extend to Get Treatment?	Army		Navy		Marine Corps		Air Force		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	46	66	30	56	24	39	37	82	137	60
No	24	34	24	44	37	61	8	18	93	40
Total	70	100%	54	100%	61	100%	45	100%	230	100%

Significance of differences^a between Services, $p < .001$.

^aTested by χ^2 .

relevance to explore the attitudes of current admitted drug users to the concept of an extension in obligated service for treatment. To explore this subject, the relationship of current drug use to willingness to extend was computed. Although 60% of the total sample reported a willingness to extend to receive drug treatment, there was a statistically significant difference between admitted current drug users and non-users in willingness to extend (Table 38). Drug users were less willing to extend for treatment than non-users, for whom the question is presumably academic.

Table 38

**Relationship of Current Drug Use to
Willingness to Extend for Drug Treatment**

Would You Extend to get Treat- ment?	Current Drug Use						Total	
	Alcohol or No Drug Use		Use of Marijuana or Other Psychedelics		Use of Amphetamines, Barbiturates, or Opiates			
	N	%	N	%	N	%	N	%
Yes	118	66	14	41	5	29	137	60
No	61	34	20	59	12	71	93	40
Total	179	100%	34	100%	17	100%	230	100%

Significance of differences^a between usage status groups, $p < .001$.

^aTested by χ^2 .

Suggestions for the Improvement of Drug Treatment

Each interviewee was asked to state his opinion of what should be done to improve drug treatment in the Service. Verbatim responses were transcribed for inclusion as Appendix G.

Summary

The major findings of a series of questions on the state of knowledge of drug programs among Servicemen and their attitudes toward drug rehabilitation programs may be stated as follows:

(1) There appears to be a general confusion regarding the existence of local drug treatment facilities, their location, administration, and effectiveness. However, more users of "hard drugs" reported an awareness of the existence of local drug treatment facilities than did other interviewees.

(2) A substantial majority of the sample reported having heard of the DoD exemption policy (86%). Most persons aware of the program also said they knew how to apply for treatment under the program (66%).

(3) Approximately one-half of the total sample indicated an awareness of VA programs designed to provide drug treatment to Vietnam-era veterans.

(4) A majority (84%) of the total sample felt that a person could stop using a hard drug such as heroin.

(5) A majority of the total sample expressed a willingness to extend their time in Service to receive a preferred type of drug treatment, should it be necessary. However, there was an inverse relationship between drug use and the willingness to extend for treatment.

DISCUSSION

REASONS FOR DRUG USE

In this research, examination of reasons for initial drug use was limited to an analysis of reasons for the initial use of marijuana in civilian and military environments. "Curiosity" was the most common reason given for initial use of marijuana as a civilian (before Service), and "enjoyment" and "curiosity" as reasons for initial use after entering the Service. Another reason often cited was "friends used it." Probing analysis of reasons for the initial use of the drug in the Service produced little evidence that it was used as an escape, or because of boredom or depression.

In general, the findings of this study do not support the contention that drugs are used because of pressure from friends or as an escape from problems (Addington, 1971). Instead, the reasons cited are principally curiosity and enjoyment. However, the interviews do indicate a complex structure of reasons for drug use, tending to support the position that multiple factors influence such use (Blum, 1970). Without extensive interview analyses involving much larger samples of drug users, any attempt to summarize reasons for drug use is, at best, tenuous.

The problem of investigating the motivations underlying drug abuse is well stated in an interim report by the Canadian Government Commission of Inquiry (1971). The Commission planned to continue inquiry into motivation (as well as extent of drug use, general attitudes, and other factors) through surveys. They noted, however, that answers to survey questionnaires may not be the most reliable evidence of motivation, since "motivation is too subtle, complex, and full of nuance to be adequately elicited" through questionnaires. They planned to make extensive use of impressions gained from hearing individual drug users speak, in public and private meetings, about the drug experiences and what they think the causes may be, because "In many ways we are closer here to the art of the novelist than that of the social scientist" (p. 219).

Verbatim transcriptions of discussions on the context of drug use and reasons underlying such use can indeed provide valuable insight and understanding (Brenner *et al.*, 1967). However, processing the information from a large number of interviews poses a data reduction problem. It would appear that unstructured interviews may be most useful for extending the range of theory and hypothesis about motivations for drug use, and for developing structured questions that provide a comprehensive approach to collecting data on the drug problem.

DRUG USE ON DUTY

The current use of some type of drug was reported by the majority of the sample (85%). The drug most frequently cited for typical use was alcohol (72%), with marijuana second (10%). When asked whether they had ever used drugs on duty, the majority of men admitting to the current use of alcohol stated they did not use the drug on the job (72%). Therefore, it may be inferred that approximately 10% of the total sample have consumed alcohol on duty at some time. For marijuana, 67% of current users admitted to use of the drug on duty at some time. Therefore, approximately 7% of the total

sample may be inferred to have used marijuana on duty at some time.¹ While the small number of cases in this study and their limited representativeness make the findings tentative, these initial findings of apparently comparable use of alcohol and marijuana on duty are of interest. Further research would be necessary to establish definitely the relative use of the two drugs on duty.

The findings of comparable use of alcohol and marijuana on duty at some time are of particular interest when compared to the rates of observation of use of the respective drugs on duty. Thus, 74% of the sample reported observing the use of alcohol on duty, while only 37% observed the use of marijuana on duty.² Assuming near equivalence of drug usage rates, why is there a discrepancy in the incidence of observed drug use? Two of the hypotheses that may be advanced are: First, the effects of alcohol usage on duty may be more conspicuous, and second, alcohol may be consumed on duty more often by the same individuals than is marijuana. While more research would be necessary to evaluate these alternative hypotheses, certain current findings lend support to both.

In terms of the hypothesis of differential consumption, the use of alcohol is considered as causing physiological dependence, whereas the use of marijuana is not (Grinspoon, 1971). Hence, a chronic drinker would undoubtedly be conspicuous because of continued use (Department of Health, Education, and Welfare, 1971).

In terms of the hypothesis of differential conspicuousness, alcohol was more often cited as adversely affecting job performance than was marijuana in this study. Indeed, marijuana use was occasionally cited as beneficial, or as having no effect, on job performance—claims seldom mentioned for alcohol consumption. It may be that some instances of marijuana use on duty are simply not being observed; the difficulty in visually identifying users of marijuana or other drugs has been documented (Department of Defense, 1969). Further, it is possible that moderate use of marijuana on duty does not adversely affect behavior. The claim that the moderate use of marijuana by experienced users has little negative effect on job performance is supported by research findings summarized by Barber (1970). The present data suggest that, in the opinion of the user, marijuana use seldom has "bad effects" whereas users of alcoholic beverages more often mentioned bad effects.

It is apparent that far more extensive research is needed to document the military job performance effects of drug use. The variability in drug effects has been graphically noted by Nowlis (1971):

"There is no such thing as the effect of any drug. All drugs have multiple effects and these vary from dose level to dose level, from individual to individual, from time to time in the same individual." (p.6)

Because of the limited number of admitted cases of drug use on duty in sample surveys, and because of the lack of definitive information on the effects of drug use on military job performance, a well-designed laboratory study to provide drug use analysis information may be needed to increase the precision with which performance effects of non-therapeutic drug use can be evaluated.

¹ Research by Postel indicates that use of marijuana in combat locations may consist mainly of use of the drug after a battle (Stanton, M.D. unpublished report, 1970).

² The analysis of the Drug Survey of Use: 1971, (in preparation) will present more definitive data on the observation of marijuana use on duty is presented in HumRRO Technical Report 72-8 (Fisher 1972).

KNOWLEDGE OF DRUG USAGE EFFECTS

The interviews revealed a lack of information about the effects of drugs. For example, 65% of the men did not know the effects of heroin on job performance; among those who had not actually seen heroin used on the job, this figure rose to 73%. Findings of lack of information about performance effects of marijuana use were similar; for example, 30% of the total sample did not know the effects of use of this drug, and the rate of nonobservers was 46%.

These findings pose a question: Is direct observation of drug use a necessary condition for acquiring knowledge about drug effects? In this study, when "don't know" responses were deleted, comparable percentages of mentions of drug-related job effects were obtained for those individuals who had seen a particular drug used and those who had not. Thus, it may be inferred that observation of drug use is not a prerequisite for learning about drug effects. This suggests that improved drug education programs may contribute to better understanding of the drug problem.

AWARENESS OF REHABILITATION SERVICES

This research showed a high awareness (86%) of the DoD exemption policy, but much confusion regarding local drug rehabilitation programs. Even at locations with established drug treatment programs, 44% of those interviewed did not know of the existence of the programs; 79% did not know who administered the program.

Awareness of local drug rehabilitation programs was found to be positively related to the use of "hard drugs." However, knowledge of available facilities may well have been acquired informally through the "drug culture," as contrasted to formal channels of communication. This viewpoint is supported indirectly by the finding of a substantial amount of misinformation about the availability of treatment facilities in those Service locations without formal programs (e.g., 26% Navy and 13% Air Force interviewees said there were local programs where, in fact, such programs did not exist).

Presumably this confusion derives from insufficient local efforts to announce available drug rehabilitation services where local programs exist, and insufficient information about off-base treatment facilities where there are centralized programs external to the base. In view of the new and developing nature of Service drug rehabilitation facilities, it may be necessary to generate appropriate media of communication regarding the status of local drug treatment and rehabilitation services. Periodic appraisal of servicemen's knowledge about local facilities would appear desirable to insure that base personnel can provide assistance with drug problems, particularly in emergencies such as overdose cases, should these occur.

WILLINGNESS TO EXTEND FOR DRUG TREATMENT

The interviews suggest that a minority of admitted current users of "hard drugs" such as amphetamines, barbiturates, or narcotic drugs would be willing to extend their term of obligated service in order to receive the type of drug treatment or rehabilitation they personally prefer. This finding should be tested by a study of a larger number of cases of men with potential drug problems.

The DoD has recently requested authority from Congress to extend the length of service of drug users, either on a voluntary or an involuntary basis, in order to make Veterans Administration rehabilitation treatment available (Department of Defense,

1971). If the results of the present study generalize to the population of men with drug problems, a program of voluntary extension seems likely to have only limited success, and the cooperation in rehabilitation of men extended on an involuntary basis could be minimal.

ATTITUDES TOWARD DRUG USE

This study indicates that enlisted men in the lower pay grades, that segment of the military population most frequently exposed to the drug problem, tend to perceive their immediate supervisors as completely against drug use (81%). This perception appeared congruent with attitudes toward marijuana as stated by the limited number of senior NCOs sampled in this study. For example, senior NCOs were against the use of marijuana off duty, and were for the court-martial of servicemen for the sale of marijuana.

However, the attitudes toward drug use of the NCO-supervisor and the subordinate lower-rank enlisted man are at variance. For example, 97% of the NCOs in this study supported court-martial for the sale of marijuana, compared to 52% among the subordinate population, the lower-rank enlisted men. The results appear consistent with a "generation gap" hypothesis advanced by Grinspoon (1971, p. 375). He believes that prejudice is one of the factors contributing to "the irrational and emotional atmosphere surrounding marijuana," and that one of the most obvious types of prejudice exists between the older and younger generations, with each having a bias against the other's use of particular drugs. As he views it, "alcohol is the traditional, well-established intoxicant of the older generations, whereas marijuana belongs to the younger generation and is viewed by them and their elders as a symbol of youth's social alienation."

Improved communication between supervisor and subordinate might serve to modify and reconcile their differences in attitudes toward drugs. Data obtained in this study suggest that many supervisors of enlisted men in the lower grades have not as yet communicated their attitudes about drugs. Among interviewees in the E1-3 pay grades, 39% reported that their immediate supervisor had not expressed to them his attitude toward drugs. It would appear desirable to open these channels of communication on this topic.

However, antagonism toward drug users (and their peers) among the senior NCO population may jeopardize communication on this topic. The phenomenon of hostility toward drug users has been cited by knowledgeable military observers as perhaps the most difficult problem in the implementation of military drug rehabilitation programs (Gard, 1971).

This study did indicate one interesting possibility for the involvement of enlisted careerists in drug rehabilitation programs. Most senior NCOs supported the concepts of education to halt the use of marijuana (72%) and treatment to stop the use of marijuana (67%). Although these programs were accorded less support by the lower-grade enlisted man, the findings suggest that some enlisted careerists may be valuable participants in drug programs. It is desirable to develop a more precise estimate of the extent to which this key population group will support Service drug rehabilitation objectives. The problem has been succinctly stated as follows:

"The key to success in rehabilitation is a unit environment which will provide the necessary rehabilitative support and alternative solutions to problems so that the soldier will not find it necessary to return to drug abuse." (Gard, 1971.)

Additional research needs to be performed to investigate the attitudes of the enlisted careerist, particularly if this group is to take an active part in programs of drug prevention, control, and rehabilitation.

**REFERENCES
AND
APPENDICES**

REFERENCES

- Addington, Lloyd B. "A Profile of Drug Abuse in the United States," paper for Army World Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- Baker, Stewart L., Jr. "Rehabilitation," paper for Army World-Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- Barber, Theodore X. *LSD, Marihuana, Yoga and Hypnosis*, Aldine Publishing Company, Chicago, 1970.
- Blum, R.H. et al. *Students and Drugs: Drugs In, College and High School Observations*, Jossey-Bass, Inc., San Francisco, 1970.
- Brenner, J.H., Coles, R., and Meagher, D. *Drugs and Youth*, Liveright Publishing Corporation, New York, 1967.
- Bureau of Naval Personnel. "Drugs: Navy Establishes Exemption Program," *All Hands*, Nav-Pers-O No. 656, U.S. Government Printing Office, Washington, D.C., September 1971.
- Canadian Government Commission of Inquiry. *The Non-Medical Use of Drugs*, Interim Report, Penguin Books, Middlesex, England, 1971.
- Department of the Army, Office of Personnel Operations. *Sample Survey of Military Personnel*, OPO-126 (Min), Personnel Management Development Office OPOPMP, August 1970. (For Official Use Only)
- Department of the Army, Headquarters. *Alcohol and Drug Abuse Prevention and Control Plan*, AGDA-A (M) (26 Aug 71) DCSPER-DACD, Washington, D.C., September 1971.
- Department of Defense. *Drug Abuse: Game Without Winners*, DoD GEN-33, U.S. Government Printing Office, Washington, D.C., 1969.
- Department of Defense. "DoD Notes Drop in Heroin Detection Rate in Vietnam," *Commanders Digest*, U.S. Government Printing Office, Washington, D.C., November 1971, pp. 3 and 7.
- Department of Health, Education, and Welfare, National Institute on Alcohol Abuse and Alcoholism. *Alcohol: Some Questions and Answers*, Publication No. (HSM)-71-9048, U.S. Government Printing Office, Washington, D.C., 1971.
- Dixon, W.J. (ed.) *BMD Biomedical Computer Programs*, University of California Press, Berkeley, Calif., 1970.
- Fisher, Allan H. *Preliminary Findings From the 1971 DoD Survey of Drug Use*, HumRRO Technical Report 72-8, March 1972.
- Gard, Robert G., Jr. "Department of Army Drug Abuse Program," paper for Army World-Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.

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- Grinspoon, L. *Marihuana Reconsidered*, Harvard University Press, Cambridge, Mass., 1971.
- Holloway, Harry C. "Profile of the Military Drug Addict," paper for Army World-Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- Hughes, Harold E. Banquet speech at Army World-Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- Kaim, S. "Veterans Administration Alcohol and Drug Dependence Service: Progress Report, 19 August 1971," paper for Army World-Wide Drug Abuse Conference, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- National Clearinghouse for Drug Abuse Information. *A Federal Source Book: Answers to the Most Frequently Asked Questions About Drug Abuse*, U.S. Government Printing Office, Washington, D.C., 1971.
- Nowlis, Helen H. "Prevention of Drug Abuse Through Education," paper for Army World-Wide Drug Abuse Conference, National War College, Fort Lesley J. McNair, Washington, D.C., 27-29 September 1971.
- Osgood, C.E. *Method and Theory in Experimental Psychology*, Oxford University Press, New York, 1953.

Appendix A

INTER-SERVICE SAMPLE COMPARISONS

The Service samples were compared on a variety of demographic characteristics in addition to pay grade. Analyses were performed to compare the Service samples on current age (Table A-1), race (Table A-2), current use of drugs (Table A-3), use of marijuana either in the Service or as a civilian (Table A-4), level of education at entry (Table A-5), and recent duty overseas (Table A-6).

There were no differences between the Services on current age of the interviewees.

Table A-1

Age Distribution, by Service

Current Age	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
17-21	39	56	25	46	23	51	34	56	121	53
22-23	10	14	11	20	10	22	10	16	41	18
24-25	7	10	8	15	3	7	3	5	21	9
26-29	4	6	4	7	1	2	6	10	15	7
30 or older	10	14	6	11	8	18	8	13	32	14
Total	70	100%	54	99%	45	100%	51	100%	230	101%

NS

There was no statistically significant difference between the Services in the racial composition of the interviewees. However, there was a slightly lower rate of non-white representation among Navy interviewees (4%), versus 12% non-whites overall.

Table A-2

Race Distribution, by Service

Race	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
White	62	89	52	96	39	87	49	80	202	88
Non-White	8	11	2	4	6	13	12	20	28	12
Total	70	100%	54	100%	45	100%	61	100%	230	100%

NS

There was no statistically significant difference between Services in reported current use of drugs (Table A-3). However, there was a slightly higher tendency toward reported use of amphetamines, barbiturates, or opiates among Marine Corps interviewees (12% vs. 7% use overall).

Table A-3
Current Drug Utilization, by Service

Current Drug Use Index	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
Use Alcohol Only or No Drugs	51	73	46	85	37	82	45	74	179	78
Use Marijuana or Other Psychedelic Drugs	14	20	5	9	6	13	9	15	34	15
Use Opiates, Amphetamines or Barbiturates	5	7	3	6	2	4	7	12	17	7
Total	70	100%	54	100%	45	99%	61	101%	230	100%
NS										

Differences were found between the Services on educational level at entry, recent overseas duty, and ever having used marijuana. These findings appear in Table A-4. As anticipated, the Army (36%) and Marine Corps (41%) reported more non-high school graduates than did the other Services.

Table A-4
Educational Level at Entry, by Service

Education at Entry	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
Non-High School Graduate	25	36	3	6	6	13	25	41	59	26
High School Graduate	22	31	36	67	22	49	21	34	101	44
Some College	14	20	8	15	14	31	10	16	46	20
College Graduate	9	13	7	13	3	7	5	8	24	10
Total	70	100%	54	101%	45	100%	61	99%	230	100%
$p < .001$										

There was a higher report of marijuana use at any time among the Marine Corps interviewees (59%) and Army interviewees (49%) than among representatives of the other Services (Table A-5). However, it should be recalled that current drug use did *not* differ between Services.

Table A-5
Any Reported Use of Marijuana, by Service

Ever Used Marijuana ^a	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	34	49	18	33	16	36	36	59	104	45
No	36	51	36	67	29	64	25	41	126	55
Total	70	100%	54	100%	45	100%	61	100%	230	100%

$p < .05$

^aAs a civilian or in Service.

Representatives of the Navy and the Marine Corps cited a higher rate of overseas duty assignment in the past two years than did men in the other Services (Table A-6). Duty in Southeast Asia was reported by 39% of the Marine Corps sample. Duty in Europe (33%) or both Europe and Southeast Asia (7%) was reported by Navy interviewees. The latter finding, undoubtedly, reflects the East Coast (Atlantic Fleet) Navy sample site.

Table A-6
Recent Overseas Duty Assignment, by Service

Stationed Overseas in the Past 24 Months	Army		Navy		Air Force		Marine Corps		Total	
	N	%	N	%	N	%	N	%	N	%
Yes, S.E. Asia	16	23	4	7	7	16	24	39	51	22
Yes, Europe	4	6	18	33	3	7	2	3	27	12
Yes, both Europe and S.E. Asia	1	1	2	4	0	0	0	0	3	1
No	49	70	30	56	35	78	35	57	149	65
Total	70	100%	54	100%	45	101%	61	99%	230	100%

$p < .001$

Appendix B

BNDD LETTER



UNITED STATES DEPARTMENT OF JUSTICE

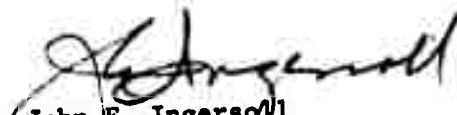
**BUREAU OF NARCOTICS AND DANGEROUS DRUGS
WASHINGTON, D.C. 20537**

JUN 21 1971

TO WHOM IT MAY CONCERN:

Under the authority vested in the Attorney General by Section 502(c) of the Comprehensive Drug Abuse Prevention and Control Act of 1970 (P. L. 91-513), and redelegated to the Director, Bureau of Narcotics and Dangerous Drugs by Section 0.100 of Title 28 of the Code of Federal Regulations, I hereby authorize Human Resources Research Organization of Alexandria, Virginia to withhold all names and other identifying characteristics of all persons who are the subjects of research entitled DoD Non-Therapeutic Drug Usage Survey and Research (Contract No. DAHC-19-70-0012 with Department of Defense).

By virtue of this authority, Human Resources Research Organization and others involved in implementing the provisions of the study may not, at any time, be compelled to reveal in any Federal, State, or local civil, criminal, administrative, legislative or other proceedings, the names and other identifying characteristics of persons who are the subject of research conducted pursuant to and in conformity with the aforementioned sections.


(John E. Ingersoll)
Director

Attachment A

Appendix C

REASONS FOR USING MARIJUANA

BEFORE ENTERING SERVICE

These are verbatim quotations from servicemen who stated their reasons for trying marijuana BEFORE entry into military service.

Army Interviewees

- "I went to a party and thought guys were crazy. The other guys were enjoying it and I really enjoyed the first time." (E1-3, 17-21,w)¹
- "For a kick—to see what the scene was all about." (E1-3, 17-21,w)
- "I was drunk. (Friends) did not force me." (E1-3, 17-21,w)
- "Brother from Orlando turned me on." (E1-3, 17-21,w)
- "I wanted to experiment. Marijuana leads to harder drugs out of curiosity." (E1-3, 17-21,w)

Navy Interviewees

- "Everybody was doing it, and I wondered what it was that made it so cool." (E1-3, 17-21,w)
- "I was just at a party—it just popped up. The first time I really didn't enjoy it, but knew it would take more than one time." (E1-3, 17-21,w)
- "I was with my girl—four of them." (E1-3, 17-21,w)
- "I tried it because my girl friend was on drugs." (E1-3, 17-21,w)

Air Force Interviewees

- "I tried it at Penn State; it was there, so I tried it." (E1-3, 22-23,w)
- "I tried it for excitement." (E4, 17-21,w)
- "I was drunk and fell into it." (E1-3, 17-21,w)
- "I did it out of depression and curiosity." (E1-3, 17-21,w)

Marine Corps Interviewees

- "I did it for enjoyment and relief." (E1-3, 17-21,w)
- "I wanted to get high, but never drank a lot." (E1-3, 17-21,w)

¹ Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

AFTER ENTERING SERVICE

These are verbatim quotations from servicemen who stated their reasons for using marijuana AFTER their entry into military service.

Army Interviewees

- "I was still experimenting with it." (E1-3, 17-21,w)¹
- "Afraid of homesickness—and getting 'down.' Wanted to help myself out." (E1-3, 17-21,w)
- "I smoke it cause it's there, but I'd rather get drunk." (E1-3, 17-21,w)
- "It was something different to do." (E5, 24-25,w)
- "I just wanted to try it." (E4, 17-21,w)

Navy Interviewees

- "Some people are talked into it. Sometimes I used it to escape the military reality. Now I use it just for a high. I know cases where a child is more intelligent due to use of pot—a person will become more inquisitive." (E4, 17-21,w)
- "It was something to do." (E1-3, 17-21,b)
- "I was tired of the old routine." (E1-3, 17-21,w)
- "I had some beer and some marijuana—tried it because it was available." (E1-3, 22-23,w)
- "I just wanted to try it once." (E1-3, 17-21,w)

Air Force Interviewees

- "It helps me to sleep, and forget any problems." (E1-3, 17-21,w)
- "I wanted to find out something about it." (E1-3, 17-21,w)
- "I needed it to 'get back in the groove' with friends in the neighborhood (on leave, in Spanish Harlem)." (E1-3, 22-23,w)
- "I was irritated with the military." (E1-3, 22-23,w)
- "I simply war ted to." (E1-3, 22-23,w)

Marine Corps Interviewees

- "Disenchantment over being in Vietnam. No one at home cared about how many of us got killed over there. The cause for being in Vietnam was undefinable. Reasons for being there were dubious." (E1-3, 22-23,w)
- "To calm down." (E1-3, 17-21,b)
- "I was working undercover for CID." (E5, 22-23,w)
- "Had to get away from the Marine Corps environment." (E1-3, 17-21,w)
- "To escape the Service." (E1-3, 17-21,w)
- "I tried it to see what effects it would have. I was interested in knowing about how it would affect men in a combat situation." (E5, 26-29,w)

¹ Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Appendix D

EFFECTS OF USING DRUGS/ALCOHOL

RESPONSES FROM MARIJUANA USERS

These are verbatim quotations from drug (marijuana) users who were asked to select one of four responses to this question: "How does the use of drugs affect your ability to do your job?" (1) It improves my performance. (2) It has no effect. (3) It hurts my performance. (4) I never use drugs on the job. The number in parentheses at the end of the statements indicates which alternative was selected.

Army Interviewees

- "Little slow—same as drinking." (E1-3, 17-21,w)¹ (3)
- "Hangover makes me grouchy and tense. Reflexes are slower. Marijuana is almost the same." (E1-3, 17-21,w) (3)
- Beer and marijuana together is really bad." (E1-3, 17-21,w) (3)
- "Can concentrate on job, then there is no effect, until work is over." (E1-3, 17-21,w) (2)
- "No effect—day went by better. One to three hours." (E1-3, 17-21,w) (2)
- "No way it affects job." (E1-3, 17-21,w) (2)
- "Can straighten the whole thing right out if I have to." (E1-3, 17-21,w) (2)

Navy Interviewees

- "I couldn't do the job as fast; my mind wandered." (E1-3, 17-21,b) (3)
- "A person should not use marijuana to avoid the realities of the service." (E4, 17-21,w) (1)
- "It doesn't do that much." (E4, 22-23,w) (2)
- "Reactions are slowed." (E4, 17-21,w) (3)

Air Force Interviewee

- "Common sense says that you don't blow pot/hash before work so that you get stoned. I have been relaxed by one or two joints, however." (E5, 22-23,w) (3)

Marine Corps Interviewees

- "Marijuana has no effect, but LSD hurts my performance." (E1-3, 17-21,w) (2, 3)
- "You never do what you think you do." (E1-3, 17-21,w) (4)
- "I could function properly on marijuana—walk, talk, drive, and so forth." (E1-3, 17-21,w) (2)
- "It's no worse than alcohol—better sometimes." (E1-3, 17-21,w) (3)

¹ Enlisted man and Officer pay grade group, age group, and race (w=white, b=black, o=other).

RESPONSES FROM ALCOHOL USERS

These are verbatim quotations from alcohol users who were asked to select one of four responses to this question: "How does the use of alcohol affect your ability to do your job?" (1) It improves my performance. (2) It has no effect. (3) It hurts my performance. (4) I never use drugs on the job. The number in parentheses at the end of the statements indicates which alternative was selected.

Army Interviewees

- "Slows it (performance) down." (E1-3, 17-21,w)¹ (3)
"Interferes with coordination." (E1-3, 17-21,o) (3)
"I don't drink on the job—if I did I'd get slow, drowsy, clumsy." (E1-3, 17-21,w) (2)
"I think slower, my reaction time is reduced." (E6, 30-34,w) (2)

Navy Interviewees

- "I feel tired." (E1-3, 17-21,w) (4)
"It slows it (performance) down." (E1-3, 17-21,w) (3)
"I don't normally drink on the job now, but my Chief sent me home once in Vietnam because I was drunk." (E6, 35-39,w) (3)
"If you're a problem drinker, it can hurt (your performance)." (E4, 17-21,w) (2)
"Others sometimes don't really give a damn (about my performance)." (E1-3, 17-21,w) (2)
"On those who do drink, there's no bad effect, but they could be better if they weren't drinking." (E1-3, 17-21,w) (4)
"It slows it (performance) down." (E7-9, 35-39,w) (3)
"I never had enough for it to affect my ability to do anything." (01-2, 24-25,w) (2)
"I'm a little slow." (E1-3, 17-21,w) (3)
"I feel better, relaxed on the job." (E5, 26-29,w) (1)

Air Force Interviewee

- "Overconfidence—alcohol would be worse (than drugs)." (E4, 22-23,b) (4)

Marine Corps Interviewees

- "Small amounts improve attitude. Large amounts hurt." (E1-3, 22-23,w) (2)
"I feel bad from drinking the night before." (01-2, 24-25,w) (3)
"It affects my thinking and ability to concentrate." (E7-9, 35-39,w) (3)

¹ Enlisted man and Officer pay grade group, age group, and race (w=white, b=black, o=other).

RESPONSES FROM USERS OF OTHER DRUGS

These are verbatim quotations from users of drugs other than marijuana or alcohol who were asked to select one of four responses to this question: "How does the use of drugs affect your ability to do your job?" (1) It improves my performance. (2) It has no effect. (3) It hurts my performance. (4) I never use drugs on the job. The number in parentheses at the end of the statements indicates which alternative was selected.

Army Interviewee

"Speed helps in PT. Speed not too good for thinking." (E1-3, 17-21,w)¹ (2)

Navy Interviewees

"Makes it better—helps a bit. It makes the job bearable." (E1-3, 17-21,w) (1)

"Pep pills were used to help on the job—I never used other drugs on the job."
(E1-3, 17-21,w) (1)

Marine Corps Interviewees

"It has a bad effect on my attitude." (E1-3, 17-21,w) (3)

"I can't function." (E1-3, 17-21,w) (3)

"It depends on the person—like alcohol, work seems easier." (E1-3, 17-21,b) (2)

¹ Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Appendix E

DRUG "FLASHBACK" EXPERIENCES

PERSONAL RECURRENCES WHILE ON DUTY

These are verbatim quotations from servicemen as they described "flashback" drug experiences occurring to them while on duty. (A "flashback" is a recurrence of some of the features of the LSD state days or months after the last dose. It can be invoked by physical or psychological stress, or by medications such as antihistamines, or by marijuana.)

Army Interviewees

- "It lasted 30 seconds. I was driving 65 miles an hour at the time and started chasing a purple elephant. I ended up doing 110 miles an hour." (E4, 17-21,w)¹
- "I saw traces and had some hallucinations (light form of LSD)." (E1-3, 17-21,w)
- "I was tired and was looking at the wall. It started to crumble and fall down. Then it was built back up—it kept crumbling and being built back up." (E1-3, 17-21,w)
- "I had another natural 'nesc' (mescaline) high." (E1-3, 17-21,w)

Navy Interviewee

- "For 5 to 10 seconds, the light fixture changed colors about six times. More flashbacks happen when a man is forced down from a trip or has had a bad trip. He wouldn't be able to do his job." (E4, 17-21,w)

Marine Corps Interviewees

- "It was like a regular trip." (E1-3, 17-21,w)
- "It was like a trip—it lasted usually about three or four minutes, sometimes for up to an hour." (E1-3, 17-21,w)
- "There was a loss of reality for about one minute." (E4, 22-23,w)
- "I saw color explosions and tracers." (E1-3, 17-21,w)
- "I was sleeping, or thought I was. I felt compression in my ears like when there's water in them, and couldn't open my eyes. I had thoughts about death." (LSD) (E1-3, 17-21,b)
- "I tried to stop a Mack truck." (E1-3, 17-21,w)
- "There was some trailing out." (E5, 22-23,w)
- "I was on a night compass march at ITR (Infantry Training Regiment). I saw a lot of colors and patterns, and couldn't tell what was in front of me. Another time I saw a dude in a truck—another time with a life jacket and gas mask on—this was while I was on guard duty one night. The truck was the only thing that was really there." (E1-3, 17-21,w)

¹ Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

"I blacked out." (E1-3, 17-21,w)¹

"While I was crossing the street, it turned into a brick wall." (E4, 17-21,w)

"It was the same as when I was 'up'." (E1-3, 17-21,b)

"Someone put some stuff in my drink at the Club. I tried to jump out of a window in the head (bathroom) and got violent. A Sergeant and Corporal had to hold me down and give me artificial respiration after I passed out from trying to choke myself and stopped breathing. They tied me to a stretcher, but I broke the straps and hit my head, so they had to sit on me all the way down to the ambulance. A second time, I was with my boyfriend—he's in CID—and blacked out, and he had to give me artificial respiration. Both times I saw colors and designs that were so vivid that I still remember them." (did not occur on duty) (E1-3, 17-21,w)

¹ Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Appendix F

"FLASHBACKS" OBSERVED IN INDIVIDUALS ON DUTY

RECURRENCES WITNESSED BY OTHERS

These are verbatim quotations of military personnel who described observing individuals who were experiencing "flashback" drug experiences while on duty. (A "flashback" is a recurrence of some of the features of the LSD state days or months after the last dose. It can be invoked by physical or psychological stress, or by medications such as antihistamines, or by marijuana.)

An asterisk (*) in front of some of the statements indicates that the individual being observed was NOT able to perform his duties while experiencing the flashback drug reaction.

Army Interviewees

- *"This happened during Basic Training. The Sergeant was talking. A man was out of it. He was sitting on the floor. It lasted a couple of minutes." (E1-3, 17-21,w)¹
- *"The man wanted to do unusual things." (E4, 22-23,b)
- "The man was driving over a hill in a truck and all of a sudden he leaned back and said 'Wow.' He said he just had a flashback and didn't know what was happening for awhile." (E1-3, 17-21,b)
- "Everything went blank for the man. He seemed to be in a daze for awhile." (E1-3, 17-21,w)
- "He was in the same condition as a man completely drunk, out of his mind." (O1-2, 24-25,w)
- "Seven people had to help one man to the hospital." (Did not occur on duty.) (E6, 35-39,w)
- "The man freaked out—went completely out of control for 45-50 minutes." (Did not occur on duty.) (E1-3, 17-21,w)

Navy Interviewees

- *"The man was a prisoner. He was hallucinating—thought he could whip everybody." (E7-9, 35-39,w)
- *"A guy got spaced out. A man was sitting on the engine. He wondered what the hell he was doing up there." (E1-3, 17-21,w)
- "The man said it was great. He can do his job, but he doesn't want to." (E4, 17-21,w)

¹ Enlisted man and Officer pay grade group, age group, and race (w=white, b=black, o=other).

Air Force Interviewees

- *"The man totally withdrew from the real world. He couldn't perform his job. This lasted for about six or seven hours." (E1-3, 17-21,w)¹
- *"He imagined things for a moment, or his mind wandered and came right back without difficulty." (E1-3, 17-21,w)
- *"He became nauseated and violent—he wasn't himself." (E4, 22-23,b)
- *"The man just stood smiling for a few seconds. He was standing in formation at the time." (E1-3, 22-23,w)
- "I saw a man have a form of flashback from alcohol as a result of drinking water after being drunk." (Did not occur on duty.) (E5, 35-39,w)

Marine Corps Interviewees

- *"He sat down and held his head for about 15 minutes. Another man left his post while experiencing a flashback." (E1-3, 16-21,b)
- *"He saw everything in motion. He was taken to sick bay." (E1-3, 17-21,o)
- *"A man drove a motorcycle into a wall while having a flashback." (E1-3, 17-21,w)
- *"I saw a man throw tables and chairs around while having a flashback." (E1-3, 17-21,w)
- *"He started shaking and lost all control. This lasted about 45 minutes. The man had to be taken to sick bay." (E4, 22-23,w)
- *"The man was standing at the time. He blacked out—wondered where he was." (E1-3, 17-21,w)
- *"He got cold chills and became nervous. He wasn't too worried about what was going on around him." (The observer claimed that this was a flashback from heroin.) (E6, 26-29,w)
- "Everything went happy. It was just like doing acid all over again. It lasted about 20 minutes." (E1-3, 17-21,w)
- "A man stood up in formation, closed his eyes, and bobbed and weaved." (E7-9, 35-39,b)

¹ Enlisted man and Officer pay grade group, age group, and race (w=white, b=black, o=other).

Appendix G

IMPROVING DRUG TREATMENT

OPINIONS OF SERVICEMEN

These verbatim quotations are extracts of opinions of servicemen who were asked what they thought should be done to improve treatment for drug abuse as it occurs in military service.

Army Interviewees

- "Individuals should be kept at the treatment facility. The problem is frequently not taken as seriously as it should be." (01-2, 24-25,w)¹
- "Discharge the man—man can't make it in the Service." (E1-3, 17-21,w)
- "Distribute information about it. Get word out a little better." (E1-3, 17-21,w)
- "Make it more well known—more stress on exemption—more competent." (E1-3, 22-23,w)
- "People should turn users in. GIs can be rewarded for turning in pushers." (E1-3, 17-21,w)
- "They should publicize the existence of treatment centers more widely." (E1-3, 17-21,w)
- "Make men using marijuana go on the program." (E5, 22-23,w)
- "Find out what is really going on. Try out different programs." (E5, 26-29,w)
- "Should have more medical help." (E1-3, 17-21,w)
- "The Army should help a man on drugs by finding a place for him to get help, but should not pay for curing him. The Army didn't issue him that first stick of marijuana." (E7-9, 40 or over,w)
- "More understanding—both of the problem and the people." (E4, 26-29,w)
- "Stiffer punishment—put all users in one Fort with no rights until they're off of it." (E6, 35-39,w)
- "Have more centers and classes." (E1-3, 17-21,w)
- "More qualified personnel—centers don't seem to do their thing." (E1-3, 17-21,w)
- "Drug education is needed prior to the Army." (E4, 24-25,w)
- "Increase discipline." (E6, 26-29,w)
- "Have people who have actually been addicted to drugs explain how they got off." (E7-9, 40 or over, b)
- "Drug programs are too lenient. They need a little bit harder approach." (E7-9, 40 or over, w)
- "More 'live-in' treatment centers. They shouldn't force men to go 'cold turkey.' Doctors should be available in a center at least twice a day. Men should be given work to occupy their minds." (E4, 22-23,w)

¹ Officer pay grade group, Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Navy Interviewees (Continued)

"Use ex-addicts to counsel people about drugs." (E1-3, 17-21,w)¹

"Things can be improved some way. Make guys unafraid to get treatment—guys will still go if you record it on their medical records." (E4, 17-21,w)

"They've already begun by being realistic." (E1-3, 22-23,w)

"It's all right now." (E1-3, 22-23,w)

"More extensive. Counseling to start—they have to get the right person to do counseling. Screen administrators for programs. If Navy shows interest, they won't have to force people to go into it." (E1-2, 24-25,w)

"They shouldn't put it in your record. Guy won't go into the program, but will remain an addict." (E6, 26-29,w)

"They should crack down on guys who use drugs. The Service has the attitude that it won't touch a man as long as he's not using drugs on the job or getting caught." (E1-3, 22-23,w)

Air Force Interviewees

"Methadone is a bad way to treat heroin users." (E1-3, 22-23,b)

"Chaplains are about the best, and, perhaps, the only decent source of counseling." (E1-3, 17-21,w)

"They should advertise the fact that they are available." (E5, 24-25,w)

"Wider dissemination of information about available programs is needed." (E6, 35-39,w)

"They need to look at the psychological factors that cause men to use drugs in the first place." (E6, 26-29,w)

"Assure people who are addicted to hard drugs that they will not be punished if they accept the treatment." (E1-3, 17-21,w)

"Cut down on the amount of paper work involved in getting into a treatment program." (E1-3, 22-23,w)

"Have addicts help other addicts. Educate people." (E4, 22-23,w)

"Give people (users) a choice always—to stay or leave the program." (E1-3, 22-23,w)

"Find out if the users are really interested in kicking it." (E1-3, 17-21,w)

"What is needed is a written (legal) guarantee against any form of punishment—plus honorable discharges for all people." (E5, 22-23,w)

"It shouldn't involve an administrative discharge." (E5, 22-23,w)

"Lay off on pressure. Emphasize personal assistance. Be clear and open about treatment information. Treat people like people." (E1-3, 17-21,w)

"A clear-cut exemption program is needed." (E1-3, 17-21,w)

"I think it's a great treatment program." (E5, 35-39,w)

"Do not restrict people to quarters. Do not publicize anything which would create on-base or off-base hassles for users." (E1-3, 17-21,b)

"Personal assistance on the part of the first-line supervisors." (E6, 30-34,w)

"The programs shouldn't be on a military installation. Separate those people who do and do not have the desire to quit. Authorities must be able to cut off all supplies." (E7-9, 35-39,w)

"Let the people know that programs do exist. Should be more information on the availability of such programs." (E4, 17-21,w)

"Just expand the facilities." (E4, 24-25,w)

¹ Officer pay grade group, Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Navy Interviewees

- "People must be treated as human beings—don't try to kick them out." (E1-3, 17-21,b)¹
- "A man should not be kicked out. The Navy can help the man, get him honorably discharged so he can get a job, and so forth." (E4, 24-25,w)
- "Find out what other people do, and do that." (E1-3, 17-21,w)
- "Treatment programs should try to motivate the man to get off drugs—there's no other way to get off." (E4, 17-21,w)
- "A man should be given a chance in civilian life—an honorable discharge." (E1-3, 17-21,w)
- "Total exemption." (E1-3, 17-21,w)
- "People who need help should be detoxified." (E4, 22-23,w)
- "They need better treatment than they have at the present time. Also, it might take two-three years to completely rehabilitate a man." (E7-9, 30-34,w)
- "True exemption—then more people will volunteer for treatment." (E6, 30-34,w)
- "Let people know more about what's available." (E1-3, 17-21,w)
- "Treatment centers should be open to the public eye where the Navy couldn't pull the bullshit that they do now." (E1-3, 17-21,w)
- "More extensive—San Diego is too far away. Treatment should be available nearby." (E1-3, 22-23,w)
- "There should be protection for a man guaranteeing him no jail as reproachment for admitting use." (E1-3, 17-21,w)
- "More treatment programs—wider spread. Family should instill proper values." (E6, 30-34,w)
- "Make it rough on the guy—don't give him drugs to make him feel better, that's for sure!" (E1-3, 17-21,w)
- "More of them—there's got to be a better program. Don't give the man an honorable discharge." (E6, 24-25,w)
- "Should start more programs—a heck of a lot more. They need to do proper hiring to get people who care and have more interest." (E6, 35-39,w)
- "Those using drugs without signs of stopping should be dealt with severely. Those wanting help should get counseling and the drug exemption program." (E5, 26-29,w)
- "More of it—more specialists (doctors) concerned with helping people on drugs." (E4, 17-21,w)
- "Treatment to get off and keep off. Professional help." (E4, 22-23,w)
- "If you're willing, you can be helped. They should drop the thing about drugs out of the enlistment contract." (E1-3, 17-21,w)
- "Study the man and give a choice of treatments. If there's no response to a given treatment, put him into a different program." (E4, 17-21,w)
- "The program is not effective as it is—they need more research to come up with more help. I don't like the exemption program—people shouldn't get away with breaking the regulations. The Service shouldn't get involved in rehabilitation. Let the VA take care of men who use drugs. Medical facilities are overcrowded in the military right now." (E7-9, 35-39,w)
- "Strong program—make the man decide to break off." (E1-3, 22-23,w)
- "From boot camp right on through, local programs need to be improved. Expand the facilities of big centers. Films and case histories of individuals may be useful. You might scare them by using ex-addicts, too." (E1-2, 24-25,w)

¹ Officer pay grade group, Enlisted man pay grade group, age group, and race (w=white, b=black, o=other).

Marine Corps Interviewees

- "There's got to be something. You'll be harrassed for turning yourself in. Stop that." (E1-3, 17-21,w)¹
- "Get different people to run them—with open minds. They must really want to work in the program." (E1-3, 17-21,w)
- "We're not concerned with drug users in the Service. Users should just be discharged." (01-2, 24-25,w)
- "Should be like exemption—no record of it—anonymity." (E1-3, 22-23,w)
- "The man who uses drugs should be isolated from his military unit and placed with others in the same situation where they are under close supervision and can receive counseling as needed." (E7-9, 35-39,w)
- "When a man brings himself in, they should keep him completely out of the military environment." (E1-3, 17-21,w)
- "The military position is a little bit too rough (court-martial leading to bad conduct discharge) on users. I never heard whether or not it is a deterrent, but if it is a deterrent, then it's good." (E6, 35-39,w)
- "It depends on your friends. If they'd help you, it'd be good. There's a better chance that you'd not go back to drugs." (E1-3, 17-21,w)
- "No bullshit. They should have rap sessions, different barracks for guys on drugs, counseling, no duty if under treatment, and no hassles." (E1-3, 17-21,w)
- "ALIMAR-77, the drug exemption program, sets a 30-day time limit on treatment and that doesn't seem like they want to get to the heart of the matter. They need something like MIRAMAR." (01-2, 26-29,w)
- "A more clear statement is needed of what happens when a man turns himself in. Publicity on people who have gone through the program would help, too." (E4, 22-23,w)
- "Keep names and all other personal information confidential." (E1-3, 17-21,w)
- "ALIMAR-77 is set up pretty well. Publicize it more." (E5, 22-23,w)
- "They should have an ex-junkie from some place like Phoenix House talk to people and counsel them." (E1-3, 17-21,w)
- "The program is bad. Turn yourself in and you only get one chance and then get thrown in jail." (E1-3, 17-21,w)
- "You can get screwed if you turn yourself in. No one wants a UD (Undesirable Discharge). It's not a good set-up." (E1-3, 17-21,w)
- "Don't just turn in guys for drugs." (E1-3, 17-21,w)
- "Publicize it more." (E6, 35-39,b)
- "Learning both sides—understanding is needed." (E5, 22-23,w)
- "Trained people are needed—you can't just take people and assign them to the job." (E7-9, 35-39,b)
- "It should be a sleep-in program. Men are currently allowed to return to the barracks to sleep. Doing this gives them access to drugs once again." (E1-3, 17-21,b)
- "Keep men completely away from their parent units." (E7-9, 35-39,b)
- "There should be certain areas set up on each coast for the treatment of drug addicts." (E6, 26-29,o)
- "Publicize the fact that it's available." (E6, 30-34,b)
- "More utilization of civilian facilities is needed." (01-2, 26-29,w)
- "Learn more about it." (E1-3, 17-21,w)
- "People shouldn't have to pay taxes for drug treatment." (E7-9, 30-34,w)
- "Methadone programs should be started." (E1-3, 17-21,o)
- "The Service is just wasting money." (E6, 26-29,w)

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HUMAN RESOURCES RESEARCH ORGANIZATION

300 North Washington Street • Alexandria, Virginia 22314

President

Executive Vice President

Director for Business Affairs and Treasurer

Director for Operations

Director for Program Development

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Dr. Meredith P. Crawford

Dr. William A. McClelland

Dr. Charles W. Smith

Mr. Arnold A. Heyl

Dr. Robert G. Smith, Jr.

Dr. Eugene A. Coogan

RESEARCH DIVISIONS

HumRRO Division No. 1 (System Operations)

300 North Washington Street

Alexandria, Virginia 22314

Dr. J. Daniel Lyons

Director

HumRRO Division No. 2

Fort Knox, Kentucky 40121

Dr. Donald F. Haggard

Director

HumRRO Division No. 3

Post Office Box 5787

Presidio of Monterey, California 93940

Dr. Howard H. McFann

Director

HumRRO Division No. 4

Post Office Box 2000

Fort Benning, Georgia 31905

Dr. T.O. Jacobs

Director

HumRRO Division No. 5

Post Office Box 6057

Fort Bliss, Texas 79916

Dr. Albert L. Kubala

Director

HumRRO Division No. 6 (Aviation)

Post Office Box 428

Fort Rucker, Alabama 36360

Dr. Wallace W. Prophet

Director

HumRRO Division No. 7 (Social Science)

300 North Washington Street

Alexandria, Virginia 22314

Dr. Arthur J. Hoehn

Director